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Spring 2006 Semiannual (III.H. and I.U.) Report for the HWMA/RCRA Post Closure Permit for the INTEC Waste Calcining Facility at the INL Site

June 2006

Idaho Cleanup Project

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Prepared for the
U.S. Department of Energy
DOE Idaho Operations Office

ABSTRACT

The Waste Calcining Facility (WCF) is located at the Idaho Nuclear Technology and Engineering Center. In 1998, the WCF was closed under an approved Hazardous Waste Management Act/Resource Conservation and Recovery Act (HWMA/RCRA) Closure Plan. Vessels and spaces were grouted and then covered with a concrete cap. The Idaho Department of Environmental Quality issued a final HWMA/RCRA post-closure permit on September 15, 2003, with an effective date of October 16, 2003. This permit sets forth procedural requirements for groundwater characterization and monitoring, maintenance, and inspections of the WCF to ensure continued protection of human health and the environment. The post-closure permit also includes semiannual reporting requirements under Permit Conditions III.H. and I.U. These reporting requirements have been combined into this single semiannual report, as agreed between the Idaho Cleanup Project and Idaho Department of Environmental Quality.

The Permit Condition III.H. portion of this report includes a description and the results of field methods associated with groundwater monitoring of the WCF. Analytical results from quarterly groundwater sampling, the results of inspections and maintenance of monitoring wells in the WCF groundwater monitoring network, and results of inspections of the concrete cap are summarized.

The Permit Condition I.U. portion of this report includes noncompliances not otherwise required to be reported under Permit Condition I.R. (advance notice of planned changes to facility activity which may result in a noncompliance) or Permit Condition I.T. (reporting of noncompliances which may endanger human health or the environment). The formaldehyde 3-day holding time from extraction to analysis was exceeded for several samples. It was subsequently determined that the laboratory originally ran these samples 1 day after extraction, well within the 3-day hold time. Due to instrument problems, the samples were reanalyzed. The reanalyses were the basis for the reported results that were 1 day past the hold time.

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TABLES

ACRONYMS

ASTM	American Society for Testing and Materials
CLP	Contract Laboratory Program
CME	Comprehensive Groundwater Monitoring Evaluation Report
COC	chain of custody
DEQ	(Idaho) Department of Environmental Quality
DOE Idaho	Department of Energy Idaho Operations Office
EPA	Environmental Protection Agency
EQL	estimated quantitation limit
GPS	groundwater protection standard
HWMA	Hazardous Waste Management Act
ICP	Idaho Cleanup Project
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
MS	matrix spike
MSD	matrix spike duplicate
NCR	nonconformance report
QA/QC	quality assurance/quality control
RCRA	Resource Conservation and Recovery Act
RRF	relative response factor
RSD	relative standard deviation
SAM	Sample and Analysis Management
SVOC	semivolatile organic compound
TFS	tank farm south

TFSE	tank farm southeast
VOC	volatile organic compound
WCF	Waste Calcining Facility

Spring 2006 Semiannual (III.H. and I.U.) Report for the HWMA/RCRA Post-Closure Permit for the INTEC Waste Calcining Facility at the INL Site

1. INTRODUCTION

The Waste Calcining Facility (WCF) was closed to a landfill standard pursuant to Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) requirements in 1998 and is entombed under a concrete cap. The facility is located within the Idaho Nuclear Technology and Engineering Center (INTEC) at the Idaho National Laboratory (INL) Site. A HWMA/RCRA post-closure permit for the WCF was issued by the Idaho Department of Environmental Quality (DEQ) on September 15, 2003, with an effective date of October 16, 2003. This permit establishes requirements for groundwater characterization and monitoring, maintenance, and inspection procedures for the WCF to ensure continued protection of human health and the environment. The post-closure permit also includes semiannual reporting requirements under Permit Conditions III.H. and I.U. These reporting requirements have been combined into this single semiannual report, due to DEQ in July 2006, as agreed between the Idaho Cleanup Project (ICP) (previously called the Idaho National Engineering and Environmental Laboratory) and DEQ (Mascareñas January 6, 2004; Bullock February 12, 2004).

1.1 Purpose and Scope

The purpose of this semiannual report is to satisfy the requirements of both Permit Conditions III.H. and I.U. of the WCF post-closure permit for the period October 16, 2005, to April 16, 2006. Permit Condition III.H. and its subsections require the following:

III.H. While in Detection or Compliance Monitoring Program(s), the permittee shall submit semi-annual reports to the Director that shall include, at a minimum:

III.H.1. A narrative summary of ground water monitoring data which has been collected to date, and a detailed listing of the monitoring and analytical data obtained not included in the previous report, including laboratory QA/QC information and all newly identified compounds from the annual Appendix IX testing;

III.H.2. Analytical results from sampling and analysis, and a narrative summary of sampling data including laboratory QA/QC information;

III.H.3. A table summary of the ground water elevation and well depth data collected in accordance with Permit Condition III.E, the results of ground water flow rate and direction calculations, and parameters used to calculate ground water flow velocities and direction for the perched aquifer in accordance with Permit Condition III.B shall be submitted annually, including a summary/statement that either:

III.H.3.a. The monitoring network as described in this permit is still valid for the purpose of satisfying the requirements of IDAPA 58.01.05.008 (40 CFR §264.97(a)); or

III.H.3.b. An in-depth evaluation of the monitoring network is warranted and a proposal, including a schedule, for such will be submitted to the Director within ten (10) calendar days of the submittal of this summary.

III.H.4. Field sampling data, including:

- Sample collection procedures
- Amount of purge water collected at each well
- Sample preservation methods
- Chain of custody information
- Any anomalies that may have occurred during sampling and analysis.

III.H.5. A summary of maintenance work done on ground water monitoring equipment; and

III.H.6. A summary of deficiencies identified during the inspections of the monitoring wells, surveyed benchmarks, and WCF cap (see Permit Condition IV.B).

Sections 2 through 5 of this report contain the required information for the Permit Condition III.H. semiannual report. Note that the information required by Permit Condition III.H.3. is to be submitted on an annual basis and will be included in the fall semiannual report, consistent with Permit Condition III.E.2., which requires "the permittee shall measure monitoring well depths annually and report results in the fall semiannual report."

Permit Condition I.U. requires the following:

I.U. The permittee shall report all other instances of noncompliance not otherwise required to be reported, in accordance with Permit Condition I.R. and I.T. of this permit, on a semiannual basis from the effective date of the permit. The reports shall contain the information, as applicable, listed in Permit Condition I.T. of this permit. Reporting shall not constitute a defense for any noncompliance.

Section 6 contains the required information for the Permit Condition I.U. report for the October 16, 2005, to April 16, 2006, reporting period.

1.2 Background

Shallow perched groundwater beneath the WCF cap and surrounding area was monitored during the first 2 years after the effective date of the post-closure permit to establish background concentrations (Permit Condition III.D.1.). Shallow perched groundwater will continue to be routinely monitored through a detection monitoring program as outlined in the RCRA post-closure permit until background concentrations are established with the DEQ director's approval . The WCF monitoring well network originally consisted of 11 wells in the vicinity of the WCF cap (Figure 1-1). All 11 wells were monitored bimonthly for water levels; groundwater samples for laboratory analysis were required to be collected from five of these monitoring wells (MW-2, MW-5-2, MW-12-2, MW-18-2, and CPP-33-1).

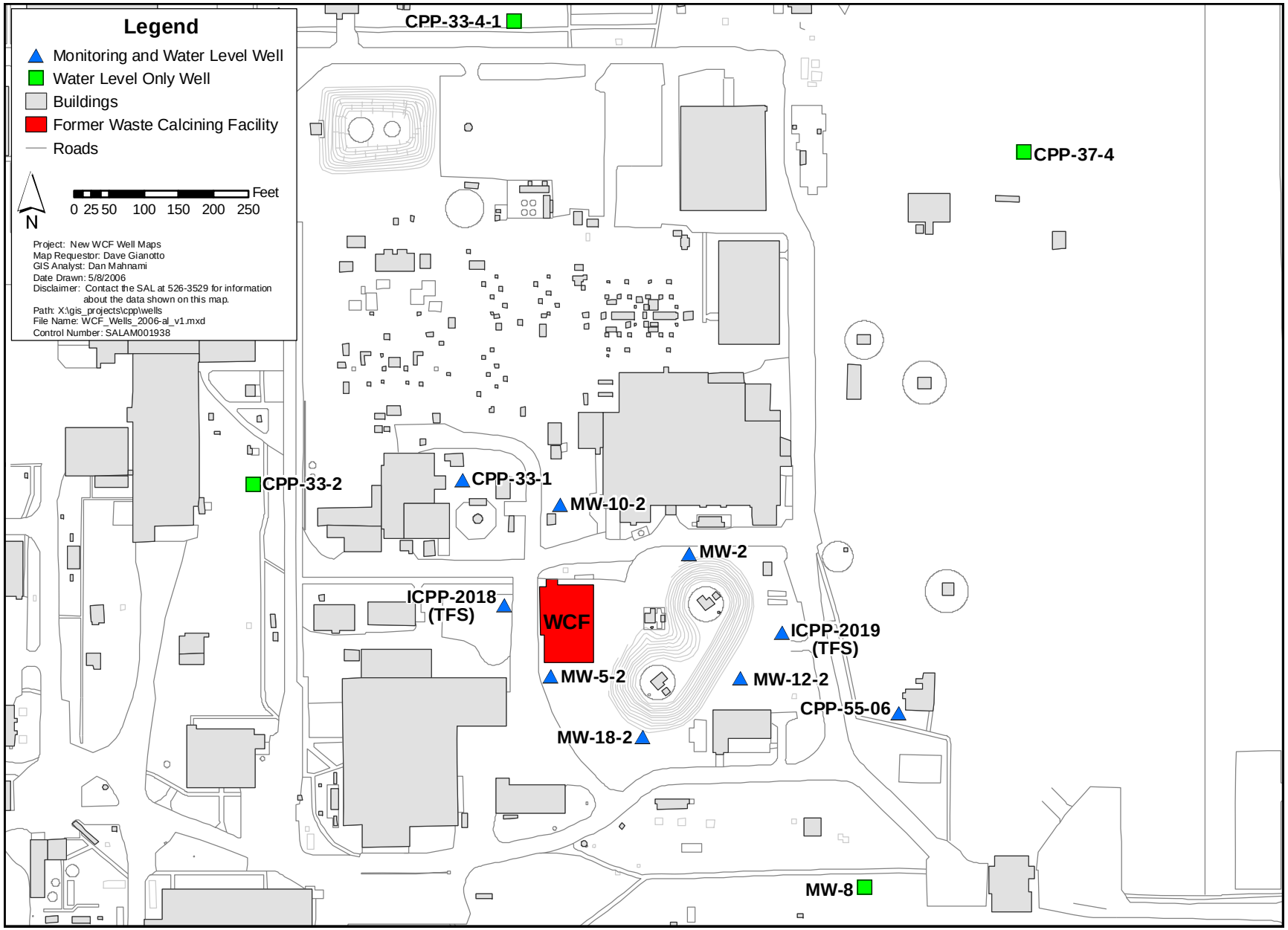

Figure 1-1. Groundwater monitoring network for WCF.

As required by Permit Condition III.H.3.a., a Monitoring Well Network Compliance Statement was provided in the fall 2004 semiannual report (DOE-NE-ID 2005a). The compliance statement assessed whether the monitoring network as described in the WCF post-closure permit has satisfied the requirements of IDAPA 58.01.05.008 (40 CFR 264.97(a)). Because monitoring wells MW-12-2, MW-18-2, and CPP-33-1 had not consistently yielded a sufficient volume of water for sampling, the compliance statement proposed evaluating the monitoring network by adding MW-10-2 and CPP-55-06 for quarterly sampling to provide supplemental information.

As required by Permit Condition III.I.2., the construction of two additional monitoring wells was completed on April 5, 2005. The two wells, identified as ICPP-2018 (alias TFS-SP for tank farm south-shallow perched) and ICPP-2019 (alias TFSE-SP for tank farm southeast-shallow perched), were first sampled during the May 10-12, 2005, sampling event.

A Class 2 permit modification request (PMR) to revise the WCF permit to add Wells ICPP-2018, ICPP-2019, and MW-10-2 as monitoring wells; change Well CPP-55-06 from a water elevation well to a monitoring well; remove Well MW-4-2 as a water elevation well; and change groundwater sampling and analysis procedures and monitoring schedule was submitted to the DEQ on November 14, 2005, and was approved by DEQ on January 17, 2006. The addition of these wells provides a total of 13 wells in the WCF monitoring network; three are background wells and six are point-of-compliance wells. Even if two of the point of-compliance wells (MW-12-2 and MW-18-2) continue to be dry, approval of this Class 2 PMR should allow the WCF monitoring network to satisfy the requirements of IDAPA 58.01.05.008 (40 CFR 264.97(a)).

Ten quarterly groundwater sampling events have been conducted since the October 16, 2003, effective date of the post-closure permit:

- November 10, 2003, and February 4, 2004 (DOE-NE-ID 2004)
- May 10–12, 2004, and August 2–4, 2004 (DOE-NE-ID 2005a)
- November 1–2, 2004, and February 1–3, 2005 (DOE-NE-ID 2005b)
- May 3–11, 2005, and August 8–11, 2005 (DOE-ID 2006)
- October 31- November 2, 2005 (Safford February 23, 2006), and January 30 – February 1, 2006 (Medema May 16, 2006).

2. FIELD METHODS

This section describes the sample collection procedures for the October/November 2005 and January/February 2006 quarterly sampling of the WCF groundwater monitoring network, volumes of purge water generated during sampling, sample preservation methods, chain-of-custody (COC) information, and anomalies or deviations from the normal field methods.

2.1 Sample Collection Procedures

Prior to groundwater sampling, the overall condition of each well is visually inspected and the depth to groundwater measured using an electronic water level indicator. All perched water wells to be sampled are purged prior to sample collection. Typically, three to five times the calculated casing volume of water in the well is removed in an effort to obtain a representative sample. During purging, specific conductance, pH, and temperature are measured. Stabilization of the parameters is satisfied when successive readings meet the following criteria:

- pH ± 0.1 standard units
- Specific conductance ± 10 µmhos/cm
- Temperature ± 0.5°C.

When purging a well, if insufficient water is available to complete the purging, the well is allowed to recover overnight and then sampled the next working day. If the well volume is still insufficient to complete purging, the available water is collected for analysis. Sampling at the well is then considered complete. The first sample is used for determining pH, specific conductance, and temperature. The following is the preferred order for sample collection:

1. Metals (filtered)
2. Volatile organic compounds (VOCs)
3. Semivolatile organic compounds (SVOCs).

The sampler protects sample bottles from contamination by using clean, waterproof gloves. The identification label is placed on the bottle with the appropriate information, such as sample ID number, name of project area/well, type of analysis, date, sampler, preservative, and collection time. Sufficient water, if available, is collected from the well to fill the required number of bottles. The water is transferred from the sampling equipment directly to the sample bottle. The bottle is filled to the neck. For samples that require volatile organic analysis, the bottle is filled until no air bubbles or headspace is left.

2.2 Purge Water

Table 2-1 shows the amount of purge water generated from the October 31 – November 2, 2005, and January 30 – February 1, 2006, sampling events. Monitoring wells MW-2, MW-5-2, and CPP-33-1 yielded sufficient water for sampling both quarterly events. Monitoring wells MW-12-2 and MW-18-2 were dry during both quarterly sampling events.

Table 2-1. Approximate volumes of purge water generated from sampling events.

Monitoring Well	Oct. 31 – Nov. 2, 2005, Purge Volume	Jan. 30 – Feb. 1, 2006, Purge Volume
CPP-33-1	0.2 gal (11/1/05)	0.4 gal (1/30/06)
MW-2	2.5 gal (11/3/05)	4.0 gal (1/31/06)
MW-5-2	5.0 gal (11/2/05)	3.2 gal (1/30/06)
MW-12-2	Dry (11/2/05)	Dry (1/31/06)
MW-18-2	Dry (11/2/05)	Dry (1/31/06)
MW-10-2	2.5 gal (11/2/05)	2.2 gal (1/30/06)
CPP-55-06	4.5 gal (11/1/05)	5.5 gal (1/31/06)
ICPP-2018	6.0 gal (11/1/05)	6.0 gal (2/1/06)
ICPP-2019	7.0 gal (11/1/05)	8.0 gal (2/1/06)

In addition to the WCF monitoring network wells, wells CPP-55-06 and MW-10-2 were also sampled and analyzed during the November 2005 event and were reported as supplemental wells as proposed in the response to the Comprehensive Groundwater Monitoring Evaluation Report (CME) for the WCF (Mascareñas December 9, 2004). Data from these supplemental wells are also provided in this report. Supplemental well MW-10-2 ran dry after repeated sampling attempts, so only a partial data set is available for this well for the November 2005 sampling event.

A RCRA Class 2 PMR to modify the WCF monitoring well network, approved by DEQ on January 17, 2006, revised the permit to add Wells ICPP-2018, ICPP-2019, and MW-10-2 as monitoring wells, change Well CPP-55-06 from a water elevation well to a monitoring well, remove Well MW-4-2 as a water elevation well, and change groundwater sampling and analysis procedures and monitoring schedule. Thus, Wells CPP-55-06 and MW-10-2 were considered monitoring wells, not supplemental wells during the January 30 – February 1, 2006, sampling event. Wells CPP-55-06, ICPP-2018, and ICPP-2019 yielded sufficient water for sampling both quarterly events. Well MW-10-2 ran dry after repeated sampling attempts, so only a partial data set is available for this well for the February 2006 sampling event.

2.3 Sample Preservation Methods

Sample preservation is conducted to ensure that target analytes do not escape from field samples or become chemically attached to sample containers before analysis. Typical sample preservation activities include the addition of acids or cooling the samples to a designated temperature. Applicable preservation requirements followed for these sampling activities, container types, and sample holding times are identified in Table 2-2.

2.4 Chain of Custody

COC procedures begin immediately after collection of the first sample. After sample collection, the sampling team initiates COC forms to track the samples. All samples remain in custody of the sampling team until the custody is transferred to the analytical laboratory sample custodian. Upon receipt of samples at the laboratory, the sample custodian reviews the sample labels and the COC form

Table 2-2. Summary of sample preservation methods.

Analysis	Container Type	Holding Time	Preservative
Metals (filtered; SW 846 methods 6010B, 200.9, 7470A, and CLP ILM040-EPA 335.2)	Plastic	180 days	HNO_3 pH <2
VOCs (SW-846 Method 8260B) Isobutyl alcohol (SW-846 Method 8015B)	Glass vials	14 days	H_2SO_4, pH <2, cool to 4˚ C
SVOCs (SW-846 Method 8270) 1,4-Dioxane (SW-846 Method 8270C)	Amber glass	7/40 days extraction/analysis	Cool to 4˚ C
Hydrazine (ASTM 1385)	Plastic	Analyze as soon as possible	None
Cyanide (SW-846, Method 9010)	Plastic	Analyze as soon as possible	50% NaOH to pH >12, cool to 4° C
Formaldehyde (SW-846 Method 8315A)	Amber glass	3 days to extraction; 3 days to analysis	Cool to 4° C
Gamma screen	High-density polyethelene or lab-supplied	30 days	No preservative

to ensure completeness and accuracy. If discrepancies are noted during this review, immediate corrective action is sought with the sampling team member(s) identified on the COC relinquishing custody. Pending successful corrective action, the laboratory sample custodian signs and dates the COC signifying acceptance of delivery and custody of the samples. Copies of all COC forms for the October 31 – November 2, 2005, and the January 31 – February 1, 2006, sampling events are included Appendix A.

2.5 Anomalies

There were no data quality problems associated with WCF monitoring network wells for the ninth quarterly (October-November 2005) sampling event (McNeel January 3, 2006); however, an unusual toluene result was discussed in this letter and the outcome of the proposed resolution of the toluene issue is further discussed below.

A validated, unqualified result of 600 µg/L toluene was detected at Well MW-10-2 during the October-November 2005 sampling event (sample number WCF12201VA). At the time this sample was taken, this well was considered a supplemental well that was monitored in response to the CME. As a follow-up to this elevated toluene level, ICP proposed obtaining duplicate VOC samples from this well during the WCF 10th quarterly sampling event (Hutten January 11, 2006, and Safford February 23, 2006). This well did not consistently yield a sufficient volume of water for the full suite of WCF analytes, and the preferred order of sample collection listed in the WCF permit indicates that metals are to be sampled before VOCs. Thus, in order to be sure there was sufficient water for duplicate VOC analyses from this well, ICP requested concurrence from DEQ to change the preferred order of sampling for Well MW-10-2 only during the 10th quarterly sampling event so that the VOC and the VOC duplicate would be sampled first. DEQ approved this revised sampling order for MW-10-2 for the 10th quarterly sampling event (English January 12, 2006).

Duplicate volatile organic samples were taken from Well MW-10-2 on January 31, 2006. Validated, unqualified results of 92 µg/L and 95 µg/L toluene were detected in the sample and the duplicate sample, respectively. These results represent a significant reduction from the 600 µg/L toluene result detected at Well MW-10-2 in November 2005.

In the March 29, 2006, ICP letter notifying DEQ of 10th quarterly WCF quality assurance/quality control (QA/QC) issues, ICP suggested again obtaining duplicate VOC samples from Well MW-10-2 during the WCF 11th quarterly sampling event in an effort to learn more about the elevated toluene result at this well (McNeel March 29, 2006). This plan was similar to the plan which was presented to DEQ for the 10th quarterly sampling event for which concurrence was obtained on January 12, 2006. DEQ concurrence with this alternate sampling plan for the 11th quarterly sampling event, dated April 7, 2006 (CCN 302493), has been received. The 11th quarterly sampling event is scheduled for May 1 – 4, 2006, and the alternate sampling order for MW-10-2 is planned.

The QA/QC anomalies numbered 1 through 4 occurred during sampling and analysis associated with the 10th quarterly (January 30 - February 1, 2006) sampling event and were previously reported as required by post-closure permit III.D.5 (McNeel March 29, 2006). Corrective actions for these data issues were identified in the 10th quarterly data summary (Medema May 16, 2006). Descriptions of the QA/QC anomalies are given below:

1. The initial calibration (ICAL) percent relative standard deviation (%RSD) for pyridine performed on February 21, 2006, was 20.6%, which exceeds the 15% RSD QC criterion for pyridine in all samples. Therefore, nondetected results for pyridine were qualified as estimated "UJ" in all samples.

   SW-846 Method 8000B describes several options for acceptance of the initial calibration under these circumstances. One of these options is to determine that the average of all % RSD values meet the 15% criterion for the 8270C method, which the ICAL did at 9.4%. The ICP Sample and Analysis Management (SAM) office evaluated all of the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) and matrix spike/matrix spike duplicate (MS/MSD) % recoveries and LCS/LCSD, MS/MSD relative percent differences, and all were within acceptance limits. Based on this additional evaluation, there is no significant concern based on the linearity of the initial calibration used for the pyridine qualified results.

2. The percent recovery of aniline was below the percent recovery QC criterion and was less than 10% in the MS/MSD performed on sample WCF13001V9 (Well ICPP-2018). The nondetected result for aniline was rejected "R" in the unspiked sample. It appears that aniline at Well ICPP-2018 is being destroyed by an unknown suspected hydrocarbon in the matrix.

   This situation is similar to that which occurred in Well MW-5-2 during the November 2004 sampling event when the percent recovery of aniline in the MS/MSD was also less than 10%. The to-date, unknown suspected hydrocarbon interference in Well MW-5-2 was not equally present in all of the samples, and it could not be demonstrated that the interference was across the board. As was discussed in the sixth quarterly data summary, there is not a known procedure to remove the unknown hydrocarbon complex without causing detrimental effects on the recovery of the target analytes. The INL requested a listing of tentatively identified compounds for analyses of the sixth quarterly semivolatile organic compounds.

   The tentatively identified compounds from the gas chromatograph/mass spectrometer analyses did not provide sufficient evidence to identify the hydrocarbon complex. Without any specific compounds identified to provide a chemical fingerprint, identification could not be made. The

sixth quarterly report concluded that, although there were no specific peaks that could lead to identification, based on the elution time of the hydrocarbon hump on the laboratory's gas chromatograph/mass spectrometer, the hydrocarbon hump possibly represents a degraded or weathered petrochemical. It is believed that the same circumstances explain the destruction of aniline in sample WCF13001V9 taken from Well ICPP-2018 during the 10th quarterly sampling event.

3. The initial and continuing calibrations were below the 0.05 relative response factors (RRFs) QC criterion for iodomethane (methyl iodide). Nondetected results for iodomethane were rejected "R" in all samples.

   This situation is similar to that which occurred in the first, second, and third quarters with isobutyl alcohol and 1,4-dioxane and which led to the use of alternate permitted analytical methods. However, the situation for isobutyl alcohol and 1,4-dioxane was somewhat different because the use of the standard techniques commonly results in low RRFs for isobutyl alcohol and 1,4-dioxane; whereas, the use of the standard method for iodomethane is generally successful. The standard method has not previously resulted in a low RRF for iodomethane during quarterly WCF permit monitoring. The SAM office will continue to monitor methyl iodide results closely to see if the unusually low RRF recurs.

4. The 3-day extraction to analysis holding time was exceeded for the reported formaldehyde results for samples WCF125012F, WCF128012F, WCF129012F, WCF132012F, and WCF134012F. The original laboratory data package did not fully discuss the reason for the missed hold times. The SAM office investigated the missed hold times. The investigation revealed that the laboratory originally ran the samples 1 day after extraction, well within the 3-day hold time. However, due to instrument problems, the samples were reanalyzed. The reanalyses were the basis for the reported results that were 1 day past the hold time.

   Following the inquiry from the SAM office, the laboratory provided a nonconformance report (NCR) identifying the missed holding times, the problem which precipitated the event, the repair that fixed the problem, and corrective actions. The laboratory's self-generated NCR was generated prior to the SAM office inquiry but after the original data package was submitted to CH2M-WG Idaho, LLC. In addition, the laboratory supplied supporting documentation from the original analyses for evaluation. Based on the chromatographic evidence, there was poor chromatography in the form of broadened peaks. This resulted in elevated results, which were demonstrated through the required QC, specifically, the LCS. Based on the high LCS recovery, the analytical column in the high-performance liquid chromatograph was replaced. After column replacement and equilibration, the analyses proceeded with acceptable performance results. Column replacement, equilibration, and calibration can take several days, and the laboratory reanalyzed the samples as soon as possible, ultimately 1 day out of holding time. The instrument run log and reporting sheets showed that the samples were actually originally analyzed on February 3, 2006, 1 day after extraction.

   Based on the NCR and the original analyses, the laboratory took the technically appropriate steps and did everything in its power to run the samples within holding times. The analytical laboratory's communication of the problem to the SAM office initially was not presented in the original data package, but the information was in the laboratory system and retrievable as demonstrated through the SAM investigation and acquisition of the information. The analytical laboratory was not paid for the 10th quarterly formaldehyde analyses because the method-required extraction to analysis holding time was exceeded.

3. LABORATORY RESULTS

This section includes a narrative summary of groundwater monitoring data that have been collected during the ninth and 10th quarterly sampling events. Comparisons of analytical results with the groundwater protection standards (GPSs) (Table 3-1) are not required by permit while background concentrations are being established. However, the unqualified analytical results were compared to the constituent analyte list and associated GPS identified in Table 3-1 (Module III) of the HWMA/RCRA WCF post-closure permit in this report as a preliminary overview.

3.1 Groundwater Monitoring Data

During the ninth quarterly sampling event, October 31 – November 2, 2005, analytical results were obtained from monitoring wells MW-5-2, MW-2, and CPP-33-1. Samples were also obtained and analyzed from the newly constructed wells, ICPP-2018 and ICPP-2019, during this sampling event. These new wells are also known as tank farm south (TFS) and tank farm southeast (TFSE), respectively. In addition to the WCF monitoring network wells, supplemental wells CPP-55-06 and MW-10-2 were also sampled and analyzed during the October-November 2005 sampling event as was proposed in the response to the CME for the WCF (Mascareñas December 9, 2004). Data from these supplemental wells are also provided in this report. Supplemental well MW-10-2 ran dry after repeated sampling attempts, so only a partial data set is available for this well. Monitoring wells MW-12-2 and MW-18-2 were dry during the ninth quarterly sampling event; therefore, no samples were obtained from these wells in November 2005.

Table 3-1. Constituent analyte list and associated estimated quantitation limits (EQLs) and groundwater protection standards (GPSs) (DEQ 2004).

Constituent	EQL (µg/L)	GPS (µg/L)
Arsenic	5	20
Barium	20	4,000
Cadmium	1	10
Chromium	10	200
Lead	3	30
Mercury	0.2	4
Selenium	20	100
Silver	10	200
Vanadium	20	5,200
1,1,1-trichloroethane	1	400
1,1,2-trichloroethane	1	10
Carbon tetrachloride	1	10
Trichloroethene	1	10
Tetrachloroethene	1	10
Carbon disulfide	1	2,000
Toluene	1	2,000
Pyridine	5	720

Constituent	EQL (µg/L)	GPS (µg/L)
Isobutyl alcohol	50	36,000
Methyl ethyl ketone	5	38,000
Aniline	5	240
Benzene	1	10
Chloroform	1	200
Methylene chloride	1	86
1,4-dioxane	54	122
Methyl iodide	5	100
Phenol	5	220,000
Bromoform	1	200
Vinyl chloride	2	4
Trans-1,2-dichloroethylene	5	200
Cis-1,2-dichloroethylene	5	140
Cyanide	10	400
Formaldehyde	232	110,000
Hydrazine	5	0.44

During the 10th quarterly sampling event, January 30 - February 1, 2006, analytical results were obtained from monitoring wells MW-2, MW-5-2, MW-10-2, CPP-33-1, CPP-55-06, ICPP-2018, and ICPP-2019. Monitoring wells MW-12-2 and MW-18-2 were dry during the 10th quarterly sampling event; therefore, no samples were obtained from these wells in February 2006.

Groundwater samples were analyzed for the constituent analyte list in Table 3 of the WCF Post-Closure Permit. Results for constituents that were detected above the permit-required estimated quantitation limits (EQL) are discussed below:

Barium

Validated unqualified detections of barium in the WCF monitoring wells during the October 31 – November 2, 2005 ("November"), and the January 30 – February 1, 2006 ("February"), sampling events are shown in Table 3-2. These results were all below the barium GPS of 4,000 µg/L.

Carbon Disulfide

Validated unqualified results of 2.7 µg/L carbon disulfide were reported for Well CPP-33-1 during November 2005. These results were all below the carbon disulfide GPS of 2,000 µg/L.

Tetrachloroethene

Validated unqualified results of 3.9 µg/L and 3.2 µg/L tetrachloroethene were reported for Well MW-10-2 during November 2005 and February 2006, respectively. These results were below the tetrachloroethene GPS of 10 µg/L.

Toluene

Validated unqualified results of 600 µg/L and 92 µg/L toluene were reported for Well MW-10-2 during November 2005 and February 2006, respectively. These results were below the toluene GPS of 2,000 µg/L.

Table 3-2. Validated unqualified barium results in WCF wells in November 2005 and February 2006 (µg/L).

Month	MW-5-2	MW-2	CPP-33-1	ICPP-2018	ICPP-2019	CPP-55-06	MW-10-2
Nov	221	293	129	345	157	197	235
Feb	261	248	179	353	170	200	NS[a]

a. NS = no sample was available for this sampling event.

3.2 Newly Identified Compounds

Prior to the January 17, 2006, approval of the Class 2 permit modification request, Permit Condition III.I.3. required that a sample be collected annually from one of the point of compliance wells and analyzed for all constituents listed in IDAPA 58.01.05.008 (40 CFR 264, Appendix IX) for the first 2 years after permit issuance. This permit condition was satisfied by sampling and analyses performed for the third and seventh quarterly sampling events. Any newly identified compounds shall be added to the existing list of analytes in Table 3-1 as part of the Class 3 permit modification following the establishment of the background data. The first year's sampling for Appendix IX constituents occurred in May 2004 and are reported in the Fall 2004 Semiannual Report (DOE-NE-ID 2005a). The second year's sampling for Appendix IX constituents occurred in May 2005 and were reported in the Fall 2005 Semiannual Report (DOE-ID 2006).

4. MAINTENANCE OF GROUNDWATER MONITORING EQUIPMENT

All monitoring wells are inspected quarterly, at a minimum. In addition to the quarterly inspections, the overall condition of a monitoring well is visually inspected at each visit to the well, including the quarterly sampling events and the bimonthly water-level surveys. Maintenance problems encountered at any well location are addressed following their identification. Examples of possible maintenance problems at monitoring wells could include inoperable locks, cracked surface casings, and damaged cement pads. No well maintenance problems were identified during the time period covered by this semiannual report.

A summary of work performed on groundwater monitoring wells and equipment during the time period covered by this semiannual report is included in Table 4-1.

Table 4-1. Installation of groundwater monitoring equipment.

Date	Monitoring Well	Description of Maintenance Activity
8/10/2005	MW-5	Monsoon pump installed
8/10/2005	CPP-33-1	Monsoon pump installed
10/31/2005	MW-10	Monsoon pump installed

5. INSPECTIONS

Inspections are required under Permit Condition IV.C.1. and described in Attachment 2, Section D, of the post-closure permit. Inspections of the landfill cap and two brass survey benchmarks are required semiannually. Inspections of the 11 monitoring wells included in the original monitoring system are required quarterly. As a result of the DEQ approval of the Class 2 permit modification request, the current WCF monitoring network includes 13 wells; all of which were inspected quarterly during the report period. Inspection forms are completed for these inspections; examples of the forms are included in Attachment 2 of the post-closure permit.

5.1 Monitoring Wells

No deficiencies were identified during inspections of monitoring network wells for the time period covered by this semiannual report, as required by Permit Condition III.H.6.

5.2 Surveyed Benchmarks

No deficiencies were identified during the March 22, 2006, semiannual inspection of surveyed benchmarks associated with the WCF cap.

5.3 WCF Cap

No deficiencies were identified during the March 22, 2006, semiannual inspection of the WCF cap.

6. OTHER NONCOMPLIANCE (I.U.)

Permit Condition I.U. requires reporting of all instances of noncompliance not otherwise required to be reported under Permit Condition I.R. (i.e., planned changes in the facility or activity that may result in noncompliance with the requirements of this permit) or Permit Condition I.T. (i.e., noncompliance that may endanger human health or the environment).

One “other noncompliance” occurred during the period covered by this semiannual report. The 3-day extraction to analysis holding time was exceeded for the reported formaldehyde results for samples WCF125012F, WCF128012F, WCF129012F, WCF132012F, and WCF134012F. The data package originally provided by the analytical laboratory did not discuss the reason for the missed hold time. The SAM office investigated the missed holding times. The investigation revealed that the laboratory originally ran the samples 1 day after extraction, well within the 3-day hold time. Due to instrument problems, the samples were reanalyzed. The high-performance liquid chromatograph had to be replaced, which required equilibration, and the analyses subsequently proceeded with acceptable performance results. The time required to correct these instrument problems caused the reanalyses to occur 1 day past the hold time.

7. REFERENCES

40 CFR 264, Appendix IX, 2006, "Ground-Water Monitoring List," *Code of Federal Regulations*, Office of the Federal Register, May 2006.

40 CFR 264.97, 2006, "General Ground-Water Monitoring Requirements," *Code of Federal Regulations*, Office of the Federal Register, May 2006.

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IDAPA 58.01.05.008, 2006, "Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities," Idaho Department of Administrative Procedures Act, April 11, 2006.

Mascareñas, C. S., BBWI, to B. R. Monson, DEQ, January 6, 2004, "Hazardous Waste Management Act/Resource Conservation and Recovery Act Post Closure Permit for Waste Calcining Facility at the Idaho Nuclear Technology and Engineering Center Clarifications and Submittal Date for Combined III.H. and I.U. Reports," CCN 47101.

Mascareñas, C. S., ICP, to B. R. Monson, DEQ, December 9, 2004, "Response to Comprehensive Ground Water Monitoring Evaluation for the Waste Calcine Facility on the Idaho National Engineering and Environmental Laboratory," CCN 53933.

McNeel, K., ICP, to B. R. Monson, DEQ, January 3, 2006, "Hazardous Waste Management Act/Resource Conservation and Recovery Act Post-closure Permit for the Waste Calcining Facility Status for the October 31 – November 3, 2005 Sampling Event, and a Toluene Result Discussion," CCN 301780.

McNeel, K., ICP, to B. R. Monson, DEQ, March 29, 2006, "Hazardous Waste Management Act/Resource Conservation and Recovery Act Post-closure Permit for the Waste Calcining Facility Notification for the January 30 – February 1, 2006 Sampling Event, and Toluene Results Discussion," CCN 302375.

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Appendix A

Chain-of-Custody Information

Chain-of-Custody Forms for WCF Groundwater, October – November 2005 (Ninth Quarter)

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000905

199166

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L	A L. Millward	Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534
Laboratory Shipped To: Southwest Research Institute			

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF119012F	11/01/2005 13:20	TFS-SP (2018)	97.8-117.5	GROUND WATER	Formaldehyde	4°C	3 - 1 L Amber Glass (Extra QC Volume)
WCF120012F	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass
WCF120022F	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass
WCF121012F	11/01/2005 12:45	CPP-55-06	93.1-113.1	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass

Client: CH2M-WG Idaho
SRR #28232
Project #11543.10.00X
Case: ER-SOW-534
VTSR: 11/03/05 0830
Sample(s) Received Intact

11.2.05
alm

Comments: samples have a 3 day hold time.

900006

Cooler Number(s): Red # 316 3.0°C #027

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	A L. Millward	11/02/2005 13:09				
			Ana Roman		11/3/05	0830

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000909

19916

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L.	G L. Millward	Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534
Laboratory Shipped To: Southwest Research Institute			

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF11901C2	11/01/2005 13:20	TFS-SP (2018)	97.8-117.5	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	6 - 1000 mL HDPE Bottle (Extra QC Volume) > 13
WCF119014H	11/01/2005 13:20	TFS-SP (2018)	97.8-117.5	GROUND WATER	Hydrazine	None, Analyze Immediately	3 - 250 mL HDPE Bottle (Extra QC Volume)
WCF120014H	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle
WCF120024H	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle
WCF121014H	11/01/2005 12:45	CPP-55-06	93.1-113.1	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle
WCF122014H	11/02/2005 09:55	MW-10-2	131-151	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle
WCF123014H	11/02/2005 10:35	NA - FBLK	NA	WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle
WCF12301C2	11/02/2005 10:35	NA - FBLK	NA	WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle 7 15

Client: CH2M-WG Idaho
SRR #28232
Project #11543.10.00X
Case: ER-SOW-534
VTSR: 11/03/05 0830
Sample(s) Received Intact

11-2-05
aLM

Comments:

Cooler Number(s): #556 RED 3.0°C/#527

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L.	G L. Millward	11/02/2005 13:19				
			Dino Roman		11/3/05	0830

000006

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000910

19916

Sampler (Printed): Millward, Amy L	Sampler (signature): A. L. Millward	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF11401C2	11/02/2005 11:16	MW-5-2	106.5-126.5	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle ½ > 13
WCF114014H	11/02/2005 11:16	MW-5-2	106.5-126.5	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle
WCF12001C2	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle ½ > 13
WCF12002C2	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle ½ > 13
WCF12101C2	11/01/2005 12:45	CPP-55-06	93.1-113.1	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle ½ > 13

Client: CH2M-WG Idaho
SRR #28232
Project #11543.10.00X
Case: ER-SOW-534
VTSR: 11/03/05 0830
Sample(s) Received Intact

11-2-05
alm

Comments: none

Cooler Number(s): RED # 31

3.0°C #027

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	A. L. Millward	11/02/2005 13:31				
			Dino Roman		11/3/05	0830

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000911

19916

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L	G L. Millward		
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF117012F	11/01/2005 09:58	CPP-33-1	89-99	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass
WCF11701V9	11/01/2005 09:58	CPP-33-1	89-99	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass
WCF11701SV	11/01/2005 09:58	CPP-33-1	89-99	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass

w/Rad stick

Client: CH2M-WG Idaho
SRR #28232
Project #11543.10.00X
Case: ER-SOW-534
VTSR: 11/03/05 0830
Sample(s) Received Intact

11-7-05 aLM

Comments: samples have rad stickers attached, the results for the gross alpha/ gross beta shipping screen are included with the COC.

Cooler Number(s): BLUE # 4229

3.0°C/#027

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	G L. Millward	11/02/2005 14:07				
			Art Arguello	Art Arguello	11.3.05	~~8:30~~ 830

11.3.05

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000912

19916

Page 1 of 1

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L.	G L. Millward		
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF11701C2	11/01/2005 09:58	CPP-33-1	89-99	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle 1080cpm w/Red sticker
WCF117014H	11/01/2005 09:58	CPP-33-1	89-99	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle 1080 cpm

Client: CH2M-WG Idaho
SRR #28232
Project #11543.10.00X
Case: ER-SOW-534
VTSR: 11/03/05 0830
Sample(s) Received Intact

11-2-05
ALM

Comments: Samples with rad stickers attached have had a gross alpha/ gross beta shipping screen. the results are included with the COC.

Cooler Number(s): BLUE # 4229

3.0°C/Hot27

8000000

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L.	G L. Millward	11/02/2005 14:05				
			Art Arguello	Art Arguello	11.3.05	8:30

11.3.05

435.20
9/11/2003
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INEEL CHAIN OF CUSTODY FORM

S000913

19916

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L	Cyl. Millward		
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF114012F	11/02/2005 11:16	MW-5-2	106.5-126.5	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass
WCF11401SV	11/02/2005 11:16	MW-5-2	106.5-126.5	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass
WCF11401V9	11/02/2005 11:16	MW-5-2	106.5-126.5	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass
WCF123012F	11/02/2005 10:35	NA - FBLK	NA	WATER	Formaldehyde	4°C	1 - 1 L Amber Glass

Client: CH2M-WG Idaho
SRR #28232
Project #11543.10.00X
Case: ER-SOW-534
VTSR: 11/03/05 0830
Sample(s) Received Intact

11-2-05
alm

Comments: formaldehyde sample has a 3 day hold time.

Cooler Number(s): Red # 6

30°c/#027

800000

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	Cyl. Millward	11/02/2005 14:11				
			Dino Roman		11/3/05	0830

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000916

19926

Sampler (Printed): Millward, Amy L	Sampler (signature): A. L. Millward	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF11401TQ	11/02/2005 11:16	MW-5-2	106.5-126.5	GROUND WATER	Isobutyl Alcohol	4°C	2 - 40 mL Glass Vials
WCF11401VA	11/02/2005 11:16	MW-5-2	106.5-126.5	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	3 - 40 mL Glass Vials
WCF11701VA	11/01/2005 09:58	CPP-33-1	89-99	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	3 - 40 mL Glass Vials 1400cpm RAD
WCF11701TQ	11/01/2005 09:58	CPP-33-1	89-99	GROUND WATER	Isobutyl Alcohol	4°C	2 - 40 mL Glass Vials DC 11/4/05 RAD
WCF11801VA	11/03/2005 11:07	MW-2	102-112	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	3 - 40 mL Glass Vials
WCF11801TQ	11/03/2005 11:07	MW-2	102-112	GROUND WATER	Isobutyl Alcohol	4°C	2 - 40 mL Glass Vials
WCF11901VA	11/01/2005 13:20	TFS-SP (2018)	97.8-117.5	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	9 - 40 mL Glass Vials (Extra QC Volume)
WCF11901TQ	11/01/2005 13:20	TFS-SP (2018)	97.8-117.5	GROUND WATER	Isobutyl Alcohol	4°C	6 - 40 mL Glass Vials (Extra QC Volume)
WCF12001VA	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	3 - 40 mL Glass Vials
WCF12002VA	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	3 - 40 mL Glass Vials
WCF12001TQ	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Isobutyl Alcohol	4°C	2 - 40 mL Glass Vials
WCF12002TQ	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Isobutyl Alcohol	4°C	2 - 40 mL Glass Vials
WCF12101TQ	11/01/2005 12:45	CPP-55-06	93.1-113.1	GROUND WATER	Isobutyl Alcohol	4°C	2 - 40 mL Glass Vials
WCF12101VA	11/01/2005 12:45	CPP-55-06	93.1-113.1	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	3 - 40 mL Glass Vials
WCF12201VA	11/02/2005 09:55	MW-10-2	131-151	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	3 - 40 mL Glass Vials
WCF12201TQ	11/02/2005 09:55	MW-10-2	131-151	GROUND WATER	Isobutyl Alcohol	4°C	2 - 40 mL Glass Vials
WCF12301TQ	11/02/2005 10:35	NA - FBLK	NA	WATER	Isobutyl Alcohol	4°C	2 - 40 mL Glass Vials
WCF12301VA	11/02/2005 10:35	NA - FBLK	NA	WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	3 - 40 mL Glass Vials
WCF12401VA	10/31/2005 08:00	NA - TBLK	NA	WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	3 - 40 mL Glass Vials
				11-3-05 ALM			

Client: CH2M-WG Idaho
SRR #28239
Project #11543.10.00X
Case: ER-TOS-S2673
VTSR: 11/04/05 0830
Sample(s) Received Intact

Comments: Samples with a rad sticker on them have had a gross alpha/gross beta screen performed, the results are included with the C.O.C.

Cooler Number(s): BLUE # 36

3.09 / #027

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L.	A. L. Millward	11/03/2005 13:54				
			Ana Romero		11/4/05	0830

11543.10.00X DC

A-11

435.20
9/11/2003
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INEEL CHAIN OF CUSTODY FORM

S000917

19926

Page 1 of 1

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L	A L. Millward		
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF11801C2	11/03/2005 11:07	MW-2	102-112	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle 1 > 13
WCF118014H	11/03/2005 11:07	MW-2	102-112	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle
WCF118012F	11/03/2005 11:07	MW-2	102-112	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass
WCF11801V9	11/03/2005 11:07	MW-2	102-112	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass
WCF11801SV	11/03/2005 11:07	MW-2	102-112	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass
WCF12201V8	11/03/2005 09:46	MW-10-2	131-151	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass

Client: CH2M-WG Idaho
SRR #28239
Project #11543.10.00X
Case: ER-TOS-S2673
VTSR:11/04/05 0830
Sample(s) Received Intact

11-3-05 ALM

Comments: none

Cooler Number(s): # 89 RED

3.0°C/#027

S000005

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	A L. Millward	11/03/2005 14:03				
			Dyo Romero		11/4/05	0930

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000918

199226

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L	Amy L. Millward	Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534
Laboratory Shipped To: Southwest Research Institute			

Sample IDs	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF12001SV	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass
WCF12002SV	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass
WCF12001VS	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass
WCF12002VS	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass

Client: CH2M-WG Idaho
SRR #28239
Project #11543.10.00X
Case: ER-TOS-S2673
VTSR:11/04/05 0830
Sample(s) Received Intact

11-3-05
alm

Comments: none

Cooler Number(s): BLUE # 3

3.09/#027

600009

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	Amy L. Millward	11/03/2005 14:10				
			Dino Roman		11/4/05	0830

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000919

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19926

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L	A. L. Millward		
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF11901V9	11/01/2005 13:20	TFS-SP (2018)	97.8-117.5	GROUND WATER	Semivolatile Organics	4°C	3 - 1 L Amber Glass (Extra QC Volume)
WCF12101V9	11/01/2005 12:45	CPP-55-06	93.1-113.1	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass

Client: CH2M-WG Idaho
SRR #28239
Project #11543.10.00X
Case: ER-TOS-S2673
VTSR: 11/04/05 0830
Sample(s) Received Intact

11-3-05 am

Comments: none

Cooler Number(s): RED # 150

3.0°C/#027

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	A. L. Millward	11/03/2005 14:16				
			Dina Roumm		11/4/05	0830

000012

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000920

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19926

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L	C J. Millward		
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF12101SV	11/01/2005 12:45	CPP-55-06	93.1-113.1	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass
WCF12301SV	11/02/2005 10:35	NA - FBLK	NA	WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass
WCF12301V9	11/02/2005 10:35	NA - FBLK	NA	WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass

Client: CH2M-WG Idaho
SRR #28239
Project #11543.10.00X
Case: ER-TOS-S2673
VTSR:11/04/05 0830
Sample(s) Received Intact

11-3-05 a.m.

Comments: none

Cooler Number(s): BLUE # 99

3.0 #027

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	C J. Millward	11/03/2005 14:23				
			Dan Romero		11/4/05	0830

000010

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000921

19926

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 9 QRTLY 10/05	
Millward, Amy L.	A. L. Millward	Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534
Laboratory Shipped To: Southwest Research Institute			

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF11901SV	11/01/2005 13:20	TFS-SP (2018)	97.8-117.5	GROUND WATER	1-4, Dioxane	4°C	3 - 1 L Amber Glass (Extra QC Volume)

Client: CH2M-WG Idaho
SRR #28239
Project #11543.10.00X
Case: ER-TOS-S2673
VTSR:11/04/05 0830
Sample(s) Received Intact

11-3-05
ACM

Comments: none

Cooler Number(s): RED # 37

3.0°C/#027

800000

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L.	A. L. Millward	11/03/2005 14:26				
			Dino Roman		11/4/05	0830

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S000929

19975

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER 9 QRTLY 10/05	
Millward, Amy L	A. Millward		
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-SOW-534

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF114012X	11/02/2005 11:16	MW-5-2	106.5-126.5	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	2 - 1000 mL HDPE Bottle 1.0
WCF117012X	11/01/2005 09:58	CPP-33-1	89-99	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	2 - 1000 mL HDPE Bottle 1.5
WCF118012X	11/03/2005 11:07	MW-2	102-112	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	2 - 1000 mL HDPE Bottle 1.5
WCF119012X	11/01/2005 13:20	TFS-SP (2018)	97.8-117.5	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	2 - 1000 mL HDPE Bottle 1.5
WCF120012X	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	2 - 1000 mL HDPE Bottle 1.5
WCF120022X	11/01/2005 12:13	TFSE-SP (2019)	95.2-120	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	2 - 1000 mL HDPE Bottle 1.5
WCF121012X	11/01/2005 12:45	CPP-55-06	93.1-113.1	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	2 - 1000 mL HDPE Bottle 1.0
WCF122012X	11/02/2005 09:55	MW-10-2	131-151	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	2 - 1000 mL HDPE Bottle 1.5
WCF123012X	11/02/2005 10:35	NA - FBLK	NA	WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	2 - 1000 mL HDPE Bottle 1.0

Client: CH2M-WG IDAHO
SRR #28253
Project #11543.10.00X
Case: ER-SOW-534
VTSR: 11/09/05 0830
Sample(s) Received Intact

11-8-05
atm

Comments: none

Cooler Number(s): BLUE # 530

15.0°C/#027

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	A. Millward	11/08/2005 10:51				
			J. McROMAN		11/9/05	0830

A-17

00000028

Chain-of-Custody Forms for WCF Groundwater,
January – February 2006 (10th Quarter)

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S001087

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Park, Tiffany	Tiffany Park	Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721
Laboratory Shipped To: Southwest Research Institute			

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF125014H ✓	01/30/2006 12:58 ✓	MW-5-2	106.5-126.5	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle
WCF125912F ✓	01/30/2006 12:58 ✓	MW-5-2	106.5-126.5	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass
WCF125913V ✓	01/30/2006 12:58 ✓	MW-5-2	106.5-126.5	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass
WCF125913V9 ✓	01/30/2006 12:58 ✓	MW-5-2	106.5-126.5	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass
WCF134012F ✓	01/31/2006 10:30 ✓	NA - FBLK	NA	WATER	Formaldehyde	4°C	1 - 1 L Amber Glass
WCF134014H ✓	01/31/2006 10:30 ✓	NA - FBLK	NA	WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle

1/31/06 TP

Client: CH2M-WG Idaho
SRR #28849
Project #11543.15.00X
Case: ER-TOS-S2721
VTSR: 02/01/06 0815
Sample(s) Received Intact

Comments: none

Cooler Number(s): BLUE#45

2.5°C/#027

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Park, Tiffany	Tiffany Park	01/31/2006 14:02				
			Dina Roman		2/1/06	0815

000005

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

21224
S001089

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Millward, Amy L	A. L. Millward		
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF12501C2 ✓	01/30/2006 12:58 ✓	MW-5-2	106.5-126.5	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle >12 180ppm
WCF12801C2 ✓	01/30/2006 10:08 ✓	CPP-33-1	89-99	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle >12 300ppm
WCF12901C2 ✓	01/31/2006 12:55 ✓	MW-2	102-112	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle >12 1,000
WCF13201C2 ✓	01/31/2006 10:55 ✓	CPP-55-06	93.1-113.1	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle >12 180ppm
WCF13401C2 ✓	01/31/2006 10:30 ✓	NA-FIELD BLANK - FBLK	NA	WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle >12 120ppm

Client: CH2M-WG Idaho
SRR #28656
Project #11543.15.00X
Case: ER-TOS-S2721
VTSR: 02/02/06 0815
Sample(s) Received Intact

2-01-06 aim

Comments: None

Cooler Number(s): BLUE 4229

000039

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	A. L. Millward	02/01/2006 13:51				
			Ana Roman		2/2/06	0815

OK 2/2/06 [illegible]

21224

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S001090

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Millward, Amy L	Amy L. Millward	Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721
Laboratory Shipped To: Southwest Research Institute			

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF128014H ✓	01/30/2006 10:08 ✓	CPP-33-1	89-99	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle 400 cpm
WCF128012F ✓	01/30/2006 10:08 ✓	CPP-33-1	89-99	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass 100 cpm
WCF129014H ✓	01/31/2006 12:55 ✓	MW-2	102-112	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle 260 cpm
WCF129012F ✓	01/31/2006 12:55 ✓	MW-2	102-112	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass 100 cpm
WCF132012F ✓	01/31/2006 10:55 ✓	CPP-55-06	93.1-113.1	GROUND WATER	Formaldehyde	4°C	1 - 1 L Amber Glass 100 cpm
WCF132014H ✓	01/31/2006 10:55 ✓	CPP-55-06	93.1-113.1	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle 180 cpm
WCF133014H ✓	01/31/2006 09:40 ✓	MW-10-2	131-151	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle 200

Client: CH2M-WG Idaho
SRR #28656
Project #11543.15.00X
Case: ER-TOS-S2721
VTSR: 02/02/06 0815
Sample(s) Received Intact

2-1-06 cpm

Comments: Analyze asap on these samples please. Thanks.

Cooler Number(s): BLUE 28I

000006

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Amy L	Amy L. Millward	02/01/2006 13:59				
			Dino Romero		2/2/06	0815

2.5c/4.0c/7

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

21239
S001091

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Millward, Danielle		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721
Laboratory Shipped To: Southwest Research Institute			

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF130014H	02/01/2006 10:58	TFS-SP (2018)	97.8-117.5	GROUND WATER	Hydrazine	None, Analyze Immediately	3 - 250 mL HDPE Bottle (Extra QC Volume)
WCF131014H	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle
WCF131024H	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Hydrazine	None, Analyze Immediately	1 - 250 mL HDPE Bottle

2-2-06

Client: CH2M-WG Idaho
Project #11543.15.00X
VTSR: 01/27/06 0815
Battery Check: Y
Cooler Wipe: 80 cpm

SRR #28666
Case: ER-TOS-S2721
Sample(s) Received Intact
Background Check: 80 cpm
Total CPM: 180-1,020 cpm

Comments: none

Cooler Number(s): # 98 RED

#027 | 12.0°C

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Danielle		02/02/2006 09:34	Michael Tasso		2/3/06	8:15

00008

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

21239
S001092

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Millward, Danielle		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721
Laboratory Shipped To: Southwest Research Institute			

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF12801V9	01/30/2006 10:08	CPP-33-1	89-99	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass
WCF12901V9	01/31/2006 12:55	MW-2	102-112	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass
WCF13301V9	01/31/2006 09:40	MW-10-2	131-151	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass
WCF13401V9	01/31/2006 10:30	NA - FBLK	NA	WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass

Client: CH2M-WG Idaho
Project #11543.15.00X
VTSR: 01/27/06 0815
Battery Check: Y
Cooler Wipe: 80 cpm

SRR #28666
Case: ER-TOS-S2721
Sample(s) Received Intact
Background Check: 80 cpm
Total CPM: 180-1,020 cpm

2-2-06

Comments: none

Cooler Number(s): #38 BLUE

#027 | 25°C

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Danielle		02/02/2006 09:40	Michael Jasso		2/3/06	8:15

435.20
9/11/2003
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INEEL CHAIN OF CUSTODY FORM

21239

S001093

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Sampler (Printed): Millward, Danielle	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF12801SV	01/30/2006 10:08	CPP-33-1	89-99	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass
WCF12901SV	01/31/2006 12:55	MW-2	102-112	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass 180 cpm
WCF13201SV	01/31/2006 10:55	CPP-55-06	93.1-113.1	GROUND WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass
WCF13401SV	01/31/2006 10:30	NA - FBLK	NA	WATER	1-4, Dioxane	4°C	1 - 1 L Amber Glass

2-2-06

Client: CH2M-WG Idaho
Project #11543.15.00X
VTSR: 01/27/06 0815
Battery Check: Y
Cooler Wipe: 80 cpm

SRR #28666
Case: ER-TOS-S2721
Sample(s) Received Intact
Background Check: 80 cpm
Total CPM: 180-1,020 cpm

Comments: none

Cooler Number(s): # 65 BLUE

#027 | 3.5 t

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Danielle		02/02/2006 09:46	Michael Josso		2/3/06	08:15

800008

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

21239
S001095

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Millward, Danielle			
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF13001VS ✓✓✓	02/01/2006 10:58	TFS-SP (2018)	97.8-117.5	GROUND WATER	Semivolatile Organics	4°C	3 - 1 L Amber Glass (Extra QC Volume)
WCF13102SV ✓	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	1-4, Dioxans	4°C	1 - 1 L Amber Glass

Client: CH2M-WG Idaho
Project #11543.15.00X
VTSR: 01/27/06 0815
Battery Check: Y
Cooler Wipe: 80 cpm

SRR #28666
Case: ER-TOS-S2721
Sample(s) Received Intact
Background Check: 80 cpm
Total CPM: 180-1,020 cpm

2-2-06

000010

Comments: none

Cooler Number(s): #48 BLUE

#027 | 3.5 °C

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Danielle		02/02/2006 09:56	Michael Sasso		2/3/06	8:15

435 20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

21239
S001096

Sampler (Printed): Millward, Danielle	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF13001SV	02/01/2006 10:58	TFS-SP (2018)	97.8-117.5	GROUND WATER	1-4, Dioxane	4°C	3 - 1 L Amber Glass (Extra QC Volume)
WCF13101V9	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Semivolatile Organics	4°C	1 - 1 L Amber Glass

Client: CH2M-WG Idaho
Project #11543.15.00X
VTSR: 01/27/06 0815
Battery Check: Y
Cooler Wipe: 80 cpm

SRR #28666
Case: ER-TOS-S2721
Sample(s) Received Intact
Background Check: 80 cpm
Total CPM: 180-1,020 cpm

2-2-06

600000

Comments: none

Cooler Number(s): #22 RED

#027 | 2.5°C

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Danielle		02/02/2006 10:04	Michael Jossi		2/3/06	8:15

435.20
2/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S001097

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06
Millward, Danielle		
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373
		TOS/SOW/PSR Number: ER-TOS-S2721

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF130012F	02/01/2006 10:58	TFS-SP (2018)	97.8-117.5	GROUND WATER	Formaldehyde	4°C	3 - 1 L Amber Glass (Extra QC Volume)
~~WCF13100V3~~	~~02/01/2006 10:15~~	~~TFSE-SP (2019)~~	~~95.2-120~~	~~GROUND WATER~~	~~Semivolatile Organics~~	~~4°C~~	~~1 - 1 L Amber Glass~~

TP 2/2/06

Client: CH2M-WG Idaho
Project #11543.15.00X
VTSR: 01/27/06 0815
Battery Check: Y
Cooler Wipe: 80 cpm

SRR #28666
Case: ER-TOS-S2721
Sample(s) Received Intact
Background Check: 80 cpm
Total CPM: 180-1,020 cpm

2-2-06

Comments: none

Cooler Number(s): # 45 BLUE

#027 3.5°C

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Danielle		02/02/2006 10:08	Michael Jasso		2/3/06	8:15

21239

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S001098

Sampler (Printed):	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Millward, Danielle		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721
Laboratory Shipped To: Southwest Research Institute			

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF13001C2 ✓	02/01/2006 10:58 ✓	TFS-SP (2018)	97.8-117.5	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	6 - 1000 mL HDPE Bottle (Extra QC Volume) 1,020 cpm
WCF13101C2 ✓	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle 200 cpm
WCF13102C2 ✓	02/01/2006 10:15 ✓	TFSE-SP (2019)	95.2-120	GROUND WATER	Cyanide	Ascorbic Acid/NAAsO2, NaOH to pH>12, 4°C	2 - 1000 mL HDPE Bottle 100 cpm

Client: CH2M-WG Idaho
Project #11543.15.00X
VTSR: 01/27/06 0815
Battery Check: Y
Cooler Wipe: 80 cpm

SRR #28666
Case: ER-TOS-S2721
Sample(s) Received Intact
Background Check: 80 cpm
Total CPM: 180-1,020 cpm

2-2-06

Comments: none

Cooler Number(s): # 27 BLUE

#027 2.5c

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Danielle		02/02/2006 10:13	Michael Jasso		2/3/06	8:15

21239

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

S001099

Page 1 of 1

Sampler (Printed): Millward, Danielle	Sampler (signature): Danielle Millward	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF125012X	01/30/2006 12:58	MW-5-2	106.5-126.5	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	(2) 1000 mL HDPE Bottle
WCF128012X	01/30/2006 10:08	CPP-33-1	89-99	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	(2) 1000 mL HDPE Bottle 200cpm
WCF129012X	01/31/2006 12:55	MW-2	102-112	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	(2) 1000 mL HDPE Bottle 200cpm
WCF130012X	02/01/2006 10:58	TFS-SP (2018)	97.8-117.5	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	(4) 1000 mL HDPE Bottle (Extra QC Volume)
WCF131012X	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	(2) 1000 mL HDPE Bottle
WCF131022X	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	(2) 1000 mL HDPE Bottle
WCF132012X	01/31/2006 10:55	CPP-55-06	93.1-113.1	GROUND WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	(2) 1000 mL HDPE Bottle
WCF134012X	01/31/2006 10:30	NA - FBLK	NA	WATER	Metal Set #1 Filtered (Filtered)	HNO3 to pH<2	(2) 1000 mL HDPE Bottle

Client: CH2M-WG Idaho
Project #11543.15.00X
VTSR: 01/27/06 0815
Battery Check: Y
Cooler Wipe: 80 cpm

SRR #28666
Case: ER-TOS-S2721
Sample(s) Received Intact
Background Check: 80 cpm
Total CPM: 180-1,020 cpm

2-2-06

200000

Comments: none

Cooler Number(s): #314 BLUE

#027/12.0

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Danielle	Danielle Millward	02/02/2006 10:22	Michael Tosso	Michael Tosso	2/3/06	8:15

435.20
9/11/2003
Rev. 02

INEEL CHAIN OF CUSTODY FORM

21239
S001100

Sampler (Printed): Millward, Danielle	Sampler (signature):	Project Name: WCF GROUNDWATER, 10 QRTLY 02/06	
Laboratory Shipped To: Southwest Research Institute		Sampling & Analysis Plan Number: PLN-1373	TOS/SOW/PSR Number: ER-TOS-S2721

Sample ID#	Sample Date Time	Sample Location	Depth	Sample Matrix	Analysis Type No(s)	Preservative	Remarks
WCF12501TQ	01/30/2006 12:58	MW-5-2	106.5-126.5	GROUND WATER	Isobutyl Alcohol	4°C	(2) 40 mL Glass Vials
WCF12501VA	01/30/2006 12:58	MW-5-2	106.5-126.5	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials
WCF12801VA	01/30/2006 10:08	CPP-33-1	89-99	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials
WCF12801TQ	01/30/2006 10:08	CPP-33-1	89-99	GROUND WATER	Isobutyl Alcohol	4°C	(2) 40 mL Glass Vials
WCF12901VA	01/31/2006 12:55	MW-2	102-112	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials
WCF12901TQ	01/31/2006 12:55	MW-2	102-112	GROUND WATER	Isobutyl Alcohol	4°C	(2) 40 mL Glass Vials
WCF13001VA	02/01/2006 10:58	TFS-SP (2018)	97.8-117.5	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(9) 40 mL Glass Vials (Extra QC Volume)
WCF13001TQ	02/01/2006 10:58	TFS-SP (2018)	97.8-117.5	GROUND WATER	Isobutyl Alcohol	4°C	(6) 40 mL Glass Vials (Extra QC Volume)
WCF13101VA	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials
WCF13102VA	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials
WCF13101TQ	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Isobutyl Alcohol	4°C	(2) 40 mL Glass Vials
WCF13102TQ	02/01/2006 10:15	TFSE-SP (2019)	95.2-120	GROUND WATER	Isobutyl Alcohol	4°C	(2) 40 mL Glass Vials
WCF13201TQ	01/31/2006 10:55	CPP-55-06	93.1-113.1	GROUND WATER	Isobutyl Alcohol	4°C	(2) 40 mL Glass Vials
WCF13201VA	01/31/2006 10:55	CPP-55-06	93.1-113.1	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials
WCF13301VA	01/31/2006 09:40	MW-10-2	131-151	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials
WCF13302VA	01/31/2006 09:40	MW-10-2	131-151	GROUND WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials
WCF13401TQ	01/31/2006 10:30	NA - FBLK	NA	WATER	Isobutyl Alcohol	4°C	(2) 40 mL Glass Vials
WCF13401VA	01/31/2006 10:30	NA - FBLK	NA	WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials
WCF13501VA	01/30/2006 09:00	NA - TBLK	NA	WATER	Volatile Organics	H2SO4 to pH<2, No Headspace, 4°C	(3) 40 mL Glass Vials

Client: CH2M-WG Idaho
Project #11543.15.00X
VTSR: 01/27/06 0815
Battery Check: Y
Cooler Wipe: 80 cpm

SRR #28666
Case: ER-TOS-S2721
Sample(s) Received Intact
Background Check: 80 cpm
Total CPM: 180-1,020 cpm

Comments: none

Cooler Number(s): #901 ~~PIERNA~~ RED/WHITE #027 7.5°C

Relinquished By (Printed)	Relinquished By (Signature)	Date Time	Received By (Printed)	Received By (Signature)	Date	Time
Millward, Danielle		02/02/2006 10:54	Michael Jasso		2/3/06	8:15

Appendix B

Groundwater Analytical Data and Quality Assurance/Quality Control Information

Appendix B

Groundwater Analytical Data and Quality Assurance/Quality Control Information

Compliance Monitoring Program
Annual Groundwater Sampling Results

Table B-1. WCF analytical results from October 31 – November 2, 2005, (ninth quarter) sampling event. (See Table B-3 for qualifier and flag definitions.)

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Aniline	2.5	CPP-33-1	U		11/1/05	11/19/05	WCF11701V9	62-53-3
Aniline	2.5	CPP-55-06	U		11/1/05	11/20/05	WCF12101V9	62-53-3
Aniline	2.5	ICPP-2018	U		11/1/05	11/19/05	WCF11901V9	62-53-3
Aniline	2.5	ICPP-2019	U		11/1/05	11/19/05	WCF12001V9	62-53-3
Aniline	2.5	ICPP-2019	U		11/1/05	11/19/05	WCF12002V9	62-53-3
Aniline	2.5	MW-10-2	U		11/3/05	11/20/05	WCF12201V9	62-53-3
Aniline	2.5	MW-2	U		11/3/05	11/19/05	WCF11801V9	62-53-3
Aniline	2.5	MW-5-2	U		11/2/05	11/19/05	WCF11401V9	62-53-3
Arsenic	5	CPP-33-1	U		11/1/05	11/14/05	WCF117012X	7440-38-2
Arsenic	5	CPP-55-06	U		11/1/05	11/14/05	WCF121012X	7440-38-2
Arsenic	5	ICPP-2018	U		11/1/05	11/14/05	WCF119012X	7440-38-2
Arsenic	5	ICPP-2019	U		11/1/05	11/14/05	WCF120022X	7440-38-2
Arsenic	5	ICPP-2019	U		11/1/05	11/14/05	WCF120012X	7440-38-2
Arsenic	5	MW-10-2	U		11/2/05	11/14/05	WCF122012X	7440-38-2
Arsenic	5	MW-2	U		11/3/05	11/14/05	WCF118012X	7440-38-2
Arsenic	5	MW-5-2	U		11/2/05	11/14/05	WCF114012X	7440-38-2
Barium	129	CPP-33-1			11/1/05	11/14/05	WCF117012X	7440-39-3
Barium	197	CPP-55-06			11/1/05	11/14/05	WCF121012X	7440-39-3
Barium	345	ICPP-2018			11/1/05	11/14/05	WCF119012X	7440-39-3
Barium	156	ICPP-2019			11/1/05	11/14/05	WCF120022X	7440-39-3
Barium	157	ICPP-2019			11/1/05	11/14/05	WCF120012X	7440-39-3
Barium	235	MW-10-2			11/2/05	11/14/05	WCF122012X	7440-39-3

Table B-1. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Barium	293	MW-2			11/3/05	11/14/05	WCF118012X	7440-39-3
Barium	221	MW-5-2			11/2/05	11/14/05	WCF114012X	7440-39-3
Benzene	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	71-43-2
Benzene	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	71-43-2
Benzene	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	71-43-2
Benzene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	71-43-2
Benzene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	71-43-2
Benzene	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	71-43-2
Benzene	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	71-43-2
Benzene	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	71-43-2
Bromoform	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	75-25-2
Bromoform	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	75-25-2
Bromoform	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	75-25-2
Bromoform	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	75-25-2
Bromoform	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	75-25-2
Bromoform	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	75-25-2
Bromoform	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	75-25-2
Bromoform	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	75-25-2
Cadmium	1	CPP-33-1	U		11/1/05	11/14/05	WCF117012X	7440-43-9
Cadmium	1	CPP-55-06	U		11/1/05	11/14/05	WCF121012X	7440-43-9
Cadmium	1	ICPP-2018	U		11/1/05	11/14/05	WCF119012X	7440-43-9
Cadmium	1	ICPP-2019	U		11/1/05	11/14/05	WCF120022X	7440-43-9
Cadmium	1	ICPP-2019	U		11/1/05	11/14/05	WCF120012X	7440-43-9
Cadmium	1	MW-10-2	U		11/2/05	11/14/05	WCF122012X	7440-43-9
Cadmium	1	MW-2	U		11/3/05	11/14/05	WCF118012X	7440-43-9
Cadmium	1	MW-5-2	U		11/2/05	11/14/05	WCF114012X	7440-43-9
Carbon disulfide	2.7	CPP-33-1			11/1/05	11/9/05	WCF11701VA	75-15-0
Carbon disulfide	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	75-15-0
Carbon disulfide	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	75-15-0
Carbon disulfide	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	75-15-0
Carbon disulfide	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	75-15-0
Carbon disulfide	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	75-15-0

Table B-1. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Carbon disulfide	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	75-15-0
Carbon disulfide	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	75-15-0
Carbon tetrachloride	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	56-23-5
Carbon tetrachloride	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	56-23-5
Carbon tetrachloride	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	56-23-5
Carbon tetrachloride	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	56-23-5
Carbon tetrachloride	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	56-23-5
Carbon tetrachloride	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	56-23-5
Carbon tetrachloride	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	56-23-5
Carbon tetrachloride	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	56-23-5
Chloroform	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	67-66-3
Chloroform	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	67-66-3
Chloroform	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	67-66-3
Chloroform	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	67-66-3
Chloroform	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	67-66-3
Chloroform	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	67-66-3
Chloroform	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	67-66-3
Chromium	6.6	CPP-33-1	B		11/1/05	11/14/05	WCF117012X	7440-47-3
Chromium	5.8	CPP-55-06	B		11/1/05	11/14/05	WCF121012X	7440-47-3
Chromium	5	ICPP-2018	U		11/1/05	11/14/05	WCF119012X	7440-47-3
Chromium	6.1	ICPP-2019	B		11/1/05	11/14/05	WCF120022X	7440-47-3
Chromium	6.3	ICPP-2019	B		11/1/05	11/14/05	WCF120012X	7440-47-3
Chromium	5	MW-10-2	U		11/2/05	11/14/05	WCF122012X	7440-47-3
Chromium	5	MW-2	U		11/3/05	11/14/05	WCF118012X	7440-47-3
Chloroform	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	67-66-3
Chromium	5	MW-5-2	U		11/2/05	11/14/05	WCF114012X	7440-47-3
cis-1,2-Dichloroethene	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	156-59-2
cis-1,2-Dichloroethene	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	156-59-2
cis-1,2-Dichloroethene	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	156-59-2
cis-1,2-Dichloroethene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	156-59-2
cis-1,2-Dichloroethene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	156-59-2
cis-1,2-Dichloroethene	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	156-59-2

Table B-1. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
cis-1,2-Dichloroethene	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	156-59-2
cis-1,2-Dichloroethene	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	156-59-2
trans-1,2-Dichloroethene	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	156-60-5
trans-1,2-Dichloroethene	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	156-60-5
trans-1,2-Dichloroethene	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	156-60-5
trans-1,2-Dichloroethene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	156-60-5
trans-1,2-Dichloroethene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	156-60-5
trans-1,2-Dichloroethene	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	156-60-5
trans-1,2-Dichloroethene	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	156-60-5
trans-1,2-Dichloroethene	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	156-60-5
1,4-Dioxane	2.5	CPP-33-1	U		11/1/05	11/21/05	WCF11701SV	123-91-1
1,4-Dioxane	0.53	CPP-55-06	J	J	11/1/05	11/21/05	WCF12101SV	123-91-1
1,4-Dioxane	2.5	ICPP-2018	U		11/1/05	11/21/05	WCF11901SV	123-91-1
1,4-Dioxane	2.5	ICPP-2019	U		11/1/05	11/21/05	WCF12002SV	123-91-1
1,4-Dioxane	2.5	ICPP-2019	U		11/1/05	11/21/05	WCF12001SV	123-91-1
1,4-Dioxane	2.5	MW-2	U		11/3/05	11/21/05	WCF11801SV	123-91-1
1,4-Dioxane	2.5	MW-5-2	U		11/2/05	11/21/05	WCF11401SV	123-91-1
Cyanide	5	CPP-33-1	U		11/1/05	11/15/05	WCF11701C2	57-12-5
Cyanide	5	CPP-55-06	U		11/1/05	11/15/05	WCF12101C2	57-12-5
Cyanide	5	ICPP-2018	U		11/1/05	11/15/05	WCF11901C2	57-12-5
Cyanide	5	ICPP-2019	U		11/1/05	11/15/05	WCF12002C2	57-12-5
Cyanide	5	ICPP-2019	U		11/1/05	11/15/05	WCF12001C2	57-12-5
Cyanide	5	MW-2	U		11/3/05	11/15/05	WCF11801C2	57-12-5
Cyanide	5	MW-5-2	U		11/2/05	11/15/05	WCF11401C2	57-12-5
Formaldehyde	232	CPP-33-1		U	11/1/05	11/5/05	WCF117012F	50-00-0
Formaldehyde	232	CPP-55-06		U	11/1/05	11/6/05	WCF121012F	50-00-0
Formaldehyde	232	ICPP-2018		U	11/1/05	11/5/05	WCF119012F	50-00-0
Formaldehyde	232	ICPP-2019		U	11/1/05	11/6/05	WCF120022F	50-00-0
Formaldehyde	232	ICPP-2019		U	11/1/05	11/6/05	WCF120012F	50-00-0
Formaldehyde	232	MW-2		U	11/3/05	11/6/05	WCF118012F	50-00-0
Formaldehyde	232	MW-5-2		U	11/2/05	11/5/05	WCF114012F	50-00-0
Hydrazine	5	CPP-33-1	U		11/1/05	11/3/05	WCF117014H	302-01-2

Table B-1. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Hydrazine	5	CPP-55-06	U		11/1/05	11/3/05	WCF121014H	302-01-2
Hydrazine	5	ICPP-2018	U		11/1/05	11/3/05	WCF119014H	302-01-2
Hydrazine	5	ICPP-2019	U		11/1/05	11/3/05	WCF120024H	302-01-2
Hydrazine	5	ICPP-2019	U		11/1/05	11/3/05	WCF120014H	302-01-2
Hydrazine	5	MW-10-2	U		11/2/05	11/3/05	WCF122014H	302-01-2
Hydrazine	5	MW-2	U		11/3/05	11/4/05	WCF118014H	302-01-2
Hydrazine	5	MW-5-2	U		11/2/05	11/3/05	WCF114014H	302-01-2
Methyl iodide (Iodomethane)	2	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	74-88-4
Methyl iodide (Iodomethane)	2	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	74-88-4
Methyl iodide (Iodomethane)	2	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	74-88-4
Methyl iodide (Iodomethane)	2	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	74-88-4
Methyl iodide (Iodomethane)	2	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	74-88-4
Methyl iodide (Iodomethane)	2	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	74-88-4
Methyl iodide (Iodomethane)	2	MW-2	U		11/3/05	11/9/05	WCF11801VA	74-88-4
Methyl iodide (Iodomethane)	2	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	74-88-4
Isobutyl alcohol	50	CPP-33-1	U		11/1/05	11/8/05	WCF11701TQ(1)	78-83-1
Isobutyl alcohol	50	CPP-55-06	U		11/1/05	11/8/05	WCF12101TQ(1)	78-83-1
Isobutyl alcohol	50	ICPP-2018	U		11/1/05	11/8/05	WCF11901TQ(1)	78-83-1
Isobutyl alcohol	50	ICPP-2019	U		11/1/05	11/8/05	WCF12002TQ(1)	78-83-1
Isobutyl alcohol	50	ICPP-2019	U		11/1/05	11/8/05	WCF12001TQ(1)	78-83-1
Isobutyl alcohol	50	MW-10-2	U		11/2/05	11/8/05	WCF12201TQ(1)	78-83-1
Isobutyl alcohol	50	MW-2	U		11/3/05	11/8/05	WCF11801TQ(1)	78-83-1
Isobutyl alcohol	50	MW-5-2	U		11/2/05	11/8/05	WCF11401TQ(1)	78-83-1
Lead	3	CPP-33-1	U		11/1/05	11/14/05	WCF117012X	7439-92-1
Lead	3	CPP-55-06	U		11/1/05	11/14/05	WCF121012X	7439-92-1
Lead	3	ICPP-2018	U		11/1/05	11/14/05	WCF119012X	7439-92-1
Lead	3	ICPP-2019	U		11/1/05	11/14/05	WCF120022X	7439-92-1
Lead	3	ICPP-2019	U		11/1/05	11/14/05	WCF120012X	7439-92-1
Lead	3	MW-10-2	U		11/2/05	11/14/05	WCF122012X	7439-92-1
Lead	3	MW-2	U		11/3/05	11/14/05	WCF118012X	7439-92-1
Lead	3	MW-5-2	U		11/2/05	11/14/05	WCF114012X	7439-92-1
Mercury	0.2	CPP-33-1	U		11/1/05	11/15/05	WCF117012X	7439-97-6

Table B-1. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Mercury	0.2	CPP-55-06	U		11/1/05	11/15/05	WCF121012X	7439-97-6
Mercury	0.2	ICPP-2018	U		11/1/05	11/15/05	WCF119012X	7439-97-6
Mercury	0.2	ICPP-2019	U		11/1/05	11/15/05	WCF120022X	7439-97-6
Mercury	0.2	ICPP-2019	U		11/1/05	11/15/05	WCF120012X	7439-97-6
Mercury	0.2	MW-10-2	U		11/2/05	11/15/05	WCF122012X	7439-97-6
Mercury	0.2	MW-2	U		11/3/05	11/15/05	WCF118012X	7439-97-6
Mercury	0.2	MW-5-2	U		11/2/05	11/15/05	WCF114012X	7439-97-6
Methylene chloride	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	75-09-2
Methylene chloride	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	75-09-2
Methylene chloride	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	75-09-2
Methylene chloride	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	75-09-2
Methylene chloride	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	75-09-2
Methylene chloride	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	75-09-2
Methylene chloride	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	75-09-2
Methylene chloride	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	75-09-2
Methyl ethyl ketone	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	78-93-3
Methyl ethyl ketone	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	78-93-3
Methyl ethyl ketone	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	78-93-3
Methyl ethyl ketone	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	78-93-3
Methyl ethyl ketone	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	78-93-3
Methyl ethyl ketone	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	78-93-3
Methyl ethyl ketone	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	78-93-3
Methyl ethyl ketone	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	78-93-3
Phenol	2.5	CPP-33-1	U		11/1/05	11/19/05	WCF11701V9	108-95-2
Phenol	2.5	CPP-55-06	U		11/1/05	11/20/05	WCF12101V9	108-95-2
Phenol	2.5	ICPP-2018	U		11/1/05	11/19/05	WCF11901V9	108-95-2
Phenol	2.5	ICPP-2019	U		11/1/05	11/19/05	WCF12001V9	108-95-2
Phenol	2.5	ICPP-2019	U		11/1/05	11/19/05	WCF12002V9	108-95-2
Phenol	2.5	MW-10-2	U		11/3/05	11/20/05	WCF12201V9	108-95-2
Phenol	2.5	MW-2	U		11/3/05	11/19/05	WCF11801V9	108-95-2
Phenol	2.5	MW-5-2	U		11/2/05	11/19/05	WCF11401V9	108-95-2
Pyridine	2.5	CPP-33-1	U		11/1/05	11/19/05	WCF11701V9	110-86-1

Table B-1. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Pyridine	2.5	CPP-55-06	U		11/1/05	11/20/05	WCF12101V9	110-86-1
Pyridine	2.5	ICPP-2018	U		11/1/05	11/19/05	WCF11901V9	110-86-1
Pyridine	2.5	ICPP-2019	U		11/1/05	11/19/05	WCF12001V9	110-86-1
Pyridine	2.5	ICPP-2019	U		11/1/05	11/19/05	WCF12002V9	110-86-1
Pyridine	2.5	MW-10-2	U		11/3/05	11/20/05	WCF12201V9	110-86-1
Pyridine	2.5	MW-2	U		11/3/05	11/19/05	WCF11801V9	110-86-1
Pyridine	2.5	MW-5-2	U		11/2/05	11/19/05	WCF11401V9	110-86-1
Selenium	10	CPP-33-1	U		11/1/05	11/14/05	WCF117012X	7782-49-2
Selenium	10	CPP-55-06	U		11/1/05	11/14/05	WCF121012X	7782-49-2
Selenium	10	ICPP-2018	U		11/1/05	11/14/05	WCF119012X	7782-49-2
Selenium	10	ICPP-2019	U		11/1/05	11/14/05	WCF120022X	7782-49-2
Selenium	10	ICPP-2019	U		11/1/05	11/14/05	WCF120012X	7782-49-2
Selenium	10	MW-10-2	U		11/2/05	11/14/05	WCF122012X	7782-49-2
Selenium	10	MW-2	U		11/3/05	11/14/05	WCF118012X	7782-49-2
Selenium	10	MW-5-2	U		11/2/05	11/14/05	WCF114012X	7782-49-2
Silver	5	CPP-33-1	U		11/1/05	11/14/05	WCF117012X	7440-22-4
Silver	5	CPP-55-06	U		11/1/05	11/14/05	WCF121012X	7440-22-4
Silver	5	ICPP-2018	U		11/1/05	11/14/05	WCF119012X	7440-22-4
Silver	5	ICPP-2019	U		11/1/05	11/14/05	WCF120022X	7440-22-4
Silver	5	ICPP-2019	U		11/1/05	11/14/05	WCF120012X	7440-22-4
Silver	5	MW-10-2	U		11/2/05	11/14/05	WCF122012X	7440-22-4
Silver	5	MW-2	U		11/3/05	11/14/05	WCF118012X	7440-22-4
Silver	5	MW-5-2	U		11/2/05	11/14/05	WCF114012X	7440-22-4
Tetrachloroethene	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	127-18-4
Tetrachloroethene	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	127-18-4
Tetrachloroethene	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	127-18-4
Tetrachloroethene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	127-18-4
Tetrachloroethene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	127-18-4
Tetrachloroethene	3.9	MW-10-2			11/2/05	11/9/05	WCF12201VA	127-18-4
Tetrachloroethene	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	127-18-4
Tetrachloroethene	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	127-18-4
Toluene	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	108-88-3

Table B-1. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Toluene	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	108-88-3
Toluene	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	108-88-3
Toluene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	108-88-3
Toluene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	108-88-3
Toluene	600	MW-10-2	D		11/2/05	11/9/05	WCF12201VA	108-88-3
Toluene	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	108-88-3
Toluene	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	108-88-3
1,1,1-Trichloroethane	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	71-55-6
1,1,1-Trichloroethane	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	71-55-6
1,1,1-Trichloroethane	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	71-55-6
1,1,1-Trichloroethane	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	71-55-6
1,1,1-Trichloroethane	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	71-55-6
1,1,1-Trichloroethane	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	71-55-6
1,1,1-Trichloroethane	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	71-55-6
1,1,1-Trichloroethane	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	71-55-6
1,1,2-Trichloroethane	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	79-00-5
1,1,2-Trichloroethane	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	79-00-5
1,1,2-Trichloroethane	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	79-00-5
1,1,2-Trichloroethane	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	79-00-5
1,1,2-Trichloroethane	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	79-00-5
1,1,2-Trichloroethane	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	79-00-5
1,1,2-Trichloroethane	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	79-00-5
1,1,2-Trichloroethane	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	79-00-5
Trichloroethene	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	79-01-6
Trichloroethene	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	79-01-6
Trichloroethene	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	79-01-6
Trichloroethene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	79-01-6
Trichloroethene	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	79-01-6
Trichloroethene	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	79-01-6
Trichloroethene	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	79-01-6
Trichloroethene	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	79-01-6
Vanadium	5	CPP-33-1	U		11/1/05	11/14/05	WCF117012X	7440-62-2

Table B-1. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Vanadium	5	CPP-55-06	U		11/1/05	11/14/05	WCF121012X	7440-62-2
Vanadium	5	ICPP-2018	U		11/1/05	11/14/05	WCF119012X	7440-62-2
Vanadium	5	ICPP-2019	U		11/1/05	11/14/05	WCF120022X	7440-62-2
Vanadium	5	ICPP-2019	U		11/1/05	11/14/05	WCF120012X	7440-62-2
Vanadium	5	MW-10-2	U		11/2/05	11/14/05	WCF122012X	7440-62-2
Vanadium	5	MW-2	U		11/3/05	11/14/05	WCF118012X	7440-62-2
Vanadium	5	MW-5-2	U		11/2/05	11/14/05	WCF114012X	7440-62-2
Vinyl chloride	1	CPP-33-1	U		11/1/05	11/9/05	WCF11701VA	75-01-4
Vinyl chloride	1	CPP-55-06	U		11/1/05	11/9/05	WCF12101VA	75-01-4
Vinyl chloride	1	ICPP-2018	U		11/1/05	11/9/05	WCF11901VA	75-01-4
Vinyl chloride	1	ICPP-2019	U		11/1/05	11/9/05	WCF12001VA	75-01-4
Vinyl chloride	1	ICPP-2019	U		11/1/05	11/9/05	WCF12002VA	75-01-4
Vinyl chloride	1	MW-10-2	U		11/2/05	11/9/05	WCF12201VA	75-01-4
Vinyl chloride	1	MW-2	U		11/3/05	11/9/05	WCF11801VA	75-01-4
Vinyl chloride	1	MW-5-2	U		11/2/05	11/9/05	WCF11401VA	75-01-4

CAS = Chemical Abstract Service.

Table B-2. WCF analytical results from January 30 – February 1, 2006, (10th quarter) sampling event. (See Table B-3 for qualifier and flag definitions.)

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Aniline	2.5	CPP-33-1	U		1/30/06	2/22/06	WCF12801V9	62-53-3
Aniline	2.4	CPP-55-06	U		1/31/06	2/22/06	WCF13201V9	62-53-3
Aniline	2.5	ICPP-2018	U	R	2/1/06	2/22/06	WCF13001V9	62-53-3
Aniline	2.4	ICPP-2019	U		2/1/06	2/22/06	WCF13101V9	62-53-3
Aniline	2.5	MW-10-2	U		1/31/06	2/22/06	WCF13301V9	62-53-3
Aniline	2.4	MW-2	U		1/31/06	2/22/06	WCF12901V9	62-53-3
Aniline	2.4	MW-5-2	U		1/30/06	2/22/06	WCF12501V9	62-53-3
Arsenic	2.5	CPP-33-1	B		1/30/06	2/8/06	WCF128012X	7440-38-2
Arsenic	2.5	CPP-55-06	U		1/31/06	2/8/06	WCF132012X	7440-38-2
Arsenic	2.5	ICPP-2018	U		2/1/06	2/8/06	WCF130012X	7440-38-2
Arsenic	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131012X	7440-38-2
Arsenic	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131022X	7440-38-2
Arsenic	2.5	MW-2	U		1/31/06	2/8/06	WCF129012X	7440-38-2
Arsenic	2.5	MW-5-2	U		1/30/06	2/8/06	WCF125012X	7440-38-2
Barium	179	CPP-33-1			1/30/06	2/8/06	WCF128012X	7440-39-3
Barium	200	CPP-55-06			1/31/06	2/8/06	WCF132012X	7440-39-3
Barium	353	ICPP-2018			2/1/06	2/8/06	WCF130012X	7440-39-3
Barium	170	ICPP-2019			2/1/06	2/8/06	WCF131012X	7440-39-3
Barium	171	ICPP-2019			2/1/06	2/8/06	WCF131022X	7440-39-3
Barium	248	MW-2			1/31/06	2/8/06	WCF129012X	7440-39-3
Barium	261	MW-5-2			1/30/06	2/8/06	WCF125012X	7440-39-3
Benzene	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	71-43-2
Benzene	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	71-43-2
Benzene	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	71-43-2
Benzene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	71-43-2
Benzene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	71-43-2
Benzene	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	71-43-2
Benzene	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	71-43-2
Benzene	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	71-43-2
Benzene	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	71-43-2

Table B-2. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Bromoform	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	75-25-2
Bromoform	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	75-25-2
Bromoform	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	75-25-2
Bromoform	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	75-25-2
Bromoform	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	75-25-2
Bromoform	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	75-25-2
Bromoform	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	75-25-2
Bromoform	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	75-25-2
Bromoform	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	75-25-2
Cadmium	1	CPP-33-1	U		1/30/06	2/8/06	WCF128012X	7440-43-9
Cadmium	1	CPP-55-06	U		1/31/06	2/8/06	WCF132012X	7440-43-9
Cadmium	1	ICPP-2018	U		2/1/06	2/8/06	WCF130012X	7440-43-9
Cadmium	1	ICPP-2019	U		2/1/06	2/8/06	WCF131012X	7440-43-9
Cadmium	1	ICPP-2019	U		2/1/06	2/8/06	WCF131022X	7440-43-9
Cadmium	1	MW-2	U		1/31/06	2/8/06	WCF129012X	7440-43-9
Cadmium	1	MW-5-2	U		1/30/06	2/8/06	WCF125012X	7440-43-9
Carbon disulfide	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	75-15-0
Carbon disulfide	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	75-15-0
Carbon disulfide	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	75-15-0
Carbon disulfide	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	75-15-0
Carbon disulfide	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	75-15-0
Carbon disulfide	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	75-15-0
Carbon disulfide	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	75-15-0
Carbon disulfide	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	75-15-0
Carbon disulfide	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	75-15-0
Carbon tetrachloride	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	56-23-5
Carbon tetrachloride	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	56-23-5
Carbon tetrachloride	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	56-23-5
Carbon tetrachloride	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	56-23-5
Carbon tetrachloride	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	56-23-5
Carbon tetrachloride	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	56-23-5
Carbon tetrachloride	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	56-23-5

Table B-2. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Carbon tetrachloride	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	56-23-5
Carbon tetrachloride	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	56-23-5
Chloroform	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	67-66-3
Chloroform	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	67-66-3
Chloroform	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	67-66-3
Chloroform	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	67-66-3
Chloroform	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	67-66-3
Chloroform	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	67-66-3
Chloroform	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	67-66-3
Chloroform	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	67-66-3
Chloroform	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	67-66-3
Chromium	8.3	CPP-33-1	B		1/30/06	2/8/06	WCF128012X	7440-47-3
Chromium	6.3	CPP-55-06	B		1/31/06	2/8/06	WCF132012X	7440-47-3
Chromium	2.5	ICPP-2018	U		2/1/06	2/8/06	WCF130012X	7440-47-3
Chromium	5.6	ICPP-2019	B		2/1/06	2/8/06	WCF131012X	7440-47-3
Chromium	6.4	ICPP-2019	B		2/1/06	2/8/06	WCF131022X	7440-47-3
Chromium	3	MW-2	B		1/31/06	2/8/06	WCF129012X	7440-47-3
Chromium	3.4	MW-5-2	B		1/30/06	2/8/06	WCF125012X	7440-47-3
cis-1,2-Dichloroethene	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	156-59-2
cis-1,2-Dichloroethene	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	156-59-2
cis-1,2-Dichloroethene	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	156-59-2
cis-1,2-Dichloroethene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	156-59-2
cis-1,2-Dichloroethene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	156-59-2
cis-1,2-Dichloroethene	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	156-59-2
cis-1,2-Dichloroethene	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	156-59-2
cis-1,2-Dichloroethene	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	156-59-2
cis-1,2-Dichloroethene	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	156-59-2
trans-1,2-Dichloroethene	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	156-60-5
trans-1,2-Dichloroethene	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	156-60-5
trans-1,2-Dichloroethene	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	156-60-5
trans-1,2-Dichloroethene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	156-60-5
trans-1,2-Dichloroethene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	156-60-5

Table B-2. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
trans-1,2-Dichloroethene	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	156-60-5
trans-1,2-Dichloroethene	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	156-60-5
trans-1,2-Dichloroethene	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	156-60-5
trans-1,2-Dichloroethene	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	156-60-5
1,4-Dioxane	2.4	CPP-33-1	U		1/30/06	2/23/06	WCF12801SV	123-91-1
1,4-Dioxane	2.5	CPP-55-06	U		1/31/06	2/23/06	WCF13201SV	123-91-1
1,4-Dioxane	2.5	ICPP-2018	U		2/1/06	2/23/06	WCF13001SV	123-91-1
1,4-Dioxane	2.4	ICPP-2019	U		2/1/06	2/23/06	WCF13101SV	123-91-1
1,4-Dioxane	2.4	ICPP-2019	U		2/1/06	2/23/06	WCF13102SV	123-91-1
1,4-Dioxane	2.5	MW-2	U		1/31/06	2/23/06	WCF12901SV	123-91-1
1,4-Dioxane	2.4	MW-5-2	U		1/30/06	2/23/06	WCF12501SV	123-91-1
Cyanide	5	CPP-33-1	U		1/30/06	2/7/06	WCF12801C2	57-12-5
Cyanide	5	CPP-55-06	U		1/31/06	2/7/06	WCF13201C2	57-12-5
Cyanide	5	ICPP-2018	U		2/1/06	2/7/06	WCF13001C2	57-12-5
Cyanide	5	ICPP-2019	U		2/1/06	2/7/06	WCF13102C2	57-12-5
Cyanide	5	ICPP-2019	U		2/1/06	2/7/06	WCF13101C2	57-12-5
Cyanide	5	MW-2	U		1/31/06	2/7/06	WCF12901C2	57-12-5
Cyanide	5	MW-5-2	U		1/30/06	2/7/06	WCF12501C2	57-12-5
Formaldehyde	232	CPP-33-1		UJ	1/30/06	2/6/06	WCF128012F	50-00-0
Formaldehyde	232	CPP-55-06		UJ	1/31/06	2/6/06	WCF132012F	50-00-0
Formaldehyde	232	ICPP-2018		U	2/1/06	2/6/06	WCF130012F	50-00-0
Formaldehyde	232	ICPP-2019		U	2/1/06	2/6/06	WCF131022F	50-00-0
Formaldehyde	232	ICPP-2019		U	2/1/06	2/6/06	WCF131012F	50-00-0
Formaldehyde	232	MW-2		UJ	1/31/06	2/6/06	WCF129012F	50-00-0
Formaldehyde	232	MW-5-2		UJ	1/30/06	2/6/06	WCF125012F	50-00-0
Hydrazine	5	CPP-33-1	U		1/30/06	2/2/06	WCF128014H	302-01-2
Hydrazine	5	CPP-55-06	U		1/31/06	2/2/06	WCF132014H	302-01-2
Hydrazine	5	ICPP-2018	U		2/1/06	2/3/06	WCF130014H	302-01-2
Hydrazine	5	ICPP-2019	U		2/1/06	2/3/06	WCF131024H	302-01-2
Hydrazine	5	ICPP-2019	U		2/1/06	2/3/06	WCF131014H	302-01-2
Hydrazine	5	MW-10-2	U		1/31/06	2/2/06	WCF133014H	302-01-2
Hydrazine	5	MW-2	U		1/31/06	2/2/06	WCF129014H	302-01-2

Table B-2. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Hydrazine	5	MW-5-2	U		1/30/06	2/2/06	WCF125014H	302-01-2
Methyl iodide (Iodomethane)	2	CPP-33-1	U	R	1/30/06	2/7/06	WCF12801VA	74-88-4
Methyl iodide (Iodomethane)	2	CPP-55-06	U	R	1/31/06	2/7/06	WCF13201VA	74-88-4
Methyl iodide (Iodomethane)	2	ICPP-2018	U	R	2/1/06	2/7/06	WCF13001VA	74-88-4
Methyl iodide (Iodomethane)	2	ICPP-2019	U	R	2/1/06	2/7/06	WCF13102VA	74-88-4
Methyl iodide (Iodomethane)	2	ICPP-2019	U	R	2/1/06	2/7/06	WCF13101VA	74-88-4
Methyl iodide (Iodomethane)	2	MW-10-2	U	R	1/31/06	2/7/06	WCF13302VA	74-88-4
Methyl iodide (Iodomethane)	2	MW-10-2	U	R	1/31/06	2/7/06	WCF13301VA	74-88-4
Methyl iodide (Iodomethane)	2	MW-2	U	R	1/31/06	2/7/06	WCF12901VA	74-88-4
Methyl iodide (Iodomethane)	2	MW-5-2	U	R	1/30/06	2/7/06	WCF12501VA	74-88-4
Isobutyl alcohol	50	CPP-33-1	U		1/30/06	2/6/06	WCF12801TQ	78-83-1
Isobutyl alcohol	50	CPP-55-06	U		1/31/06	2/6/06	WCF13201TQ	78-83-1
Isobutyl alcohol	50	ICPP-2018	U		2/1/06	2/6/06	WCF13001TQ	78-83-1
Isobutyl alcohol	50	ICPP-2019	U		2/1/06	2/6/06	WCF13101TQ	78-83-1
Isobutyl alcohol	50	ICPP-2019	U		1/31/06	2/6/06	WCF13102TQ	78-83-1
Isobutyl alcohol	50	MW-2	U		1/31/06	2/6/06	WCF12901TQ	78-83-1
Isobutyl alcohol	50	MW-5-2	U		1/30/06	2/6/06	WCF12501TQ	78-83-1
Lead	2.5	CPP-33-1	U		1/30/06	2/8/06	WCF128012X	7439-92-1
Lead	2.5	CPP-55-06	U		1/31/06	2/8/06	WCF132012X	7439-92-1
Lead	2.5	ICPP-2018	U		2/1/06	2/8/06	WCF130012X	7439-92-1
Lead	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131012X	7439-92-1
Lead	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131022X	7439-92-1
Lead	2.5	MW-2	U		1/31/06	2/8/06	WCF129012X	7439-92-1
Lead	2.5	MW-5-2	U		1/30/06	2/8/06	WCF125012X	7439-92-1
Mercury	0.2	CPP-33-1	U		1/30/06	2/6/06	WCF128012X	7439-97-6
Mercury	0.2	CPP-55-06	U		1/31/06	2/6/06	WCF132012X	7439-97-6
Mercury	0.2	ICPP-2018	U		2/1/06	2/6/06	WCF130012X	7439-97-6
Mercury	0.2	ICPP-2019	U		2/1/06	2/6/06	WCF131012X	7439-97-6
Mercury	0.2	ICPP-2019	U		2/1/06	2/6/06	WCF131022X	7439-97-6
Mercury	0.2	MW-2	U		1/31/06	2/6/06	WCF129012X	7439-97-6
Mercury	0.2	MW-5-2	U		1/30/06	2/6/06	WCF125012X	7439-97-6
Methylene chloride	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	75-09-2

Table B-2. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Methylene chloride	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	75-09-2
Methylene chloride	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	75-09-2
Methylene chloride	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	75-09-2
Methylene chloride	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	75-09-2
Methylene chloride	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	75-09-2
Methylene chloride	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	75-09-2
Methylene chloride	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	75-09-2
Methylene chloride	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	75-09-2
Methyl ethyl ketone	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	78-93-3
Methyl ethyl ketone	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	78-93-3
Methyl ethyl ketone	2.2	ICPP-2018			2/1/06	2/7/06	WCF13001VA	78-93-3
Methyl ethyl ketone	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	78-93-3
Methyl ethyl ketone	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	78-93-3
Methyl ethyl ketone	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	78-93-3
Methyl ethyl ketone	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	78-93-3
Methyl ethyl ketone	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	78-93-3
Methyl ethyl ketone	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	78-93-3
Phenol	2.5	CPP-33-1	U		1/30/06	2/22/06	WCF12801V9	108-95-2
Phenol	2.4	CPP-55-06	U		1/31/06	2/22/06	WCF13201V9	108-95-2
Phenol	2.5	ICPP-2018	U		2/1/06	2/22/06	WCF13001V9	108-95-2
Phenol	2.4	ICPP-2019	U		2/1/06	2/22/06	WCF13101V9	108-95-2
Phenol	2.5	MW-10-2	U		1/31/06	2/22/06	WCF13301V9	108-95-2
Phenol	2.4	MW-2	U		1/31/06	2/22/06	WCF12901V9	108-95-2
Phenol	2.4	MW-5-2	U		1/30/06	2/22/06	WCF12501V9	108-95-2
Pyridine	2.5	CPP-33-1	U	UJ	1/30/06	2/22/06	WCF12801V9	110-86-1
Pyridine	2.4	CPP-55-06	U	UJ	1/31/06	2/22/06	WCF13201V9	110-86-1
Pyridine	2.5	ICPP-2018	U	UJ	2/1/06	2/22/06	WCF13001V9	110-86-1
Pyridine	2.4	ICPP-2019	U	UJ	2/1/06	2/22/06	WCF13101V9	110-86-1
Pyridine	2.5	MW-10-2	U	UJ	1/31/06	2/22/06	WCF13301V9	110-86-1
Pyridine	2.4	MW-2	U	UJ	1/31/06	2/22/06	WCF12901V9	110-86-1
Pyridine	2.4	MW-5-2	U	UJ	1/30/06	2/22/06	WCF12501V9	110-86-1
Selenium	5.3	CPP-33-1	B		1/30/06	2/8/06	WCF128012X	7782-49-2

Table B-2. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Selenium	2.5	CPP-55-06	U		1/31/06	2/8/06	WCF132012X	7782-49-2
Selenium	2.5	ICPP-2018	U		2/1/06	2/8/06	WCF130012X	7782-49-2
Selenium	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131012X	7782-49-2
Selenium	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131022X	7782-49-2
Selenium	2.5	MW-2	U		1/31/06	2/8/06	WCF129012X	7782-49-2
Selenium	2.5	MW-5-2	U		1/30/06	2/8/06	WCF125012X	7782-49-2
Silver	2.5	CPP-33-1	U		1/30/06	2/8/06	WCF128012X	7440-22-4
Silver	2.5	CPP-55-06	U		1/31/06	2/8/06	WCF132012X	7440-22-4
Silver	2.5	ICPP-2018	U		2/1/06	2/8/06	WCF130012X	7440-22-4
Silver	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131012X	7440-22-4
Silver	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131022X	7440-22-4
Silver	2.5	MW-2	U		1/31/06	2/8/06	WCF129012X	7440-22-4
Silver	2.5	MW-5-2	U		1/30/06	2/8/06	WCF125012X	7440-22-4
Tetrachloroethene	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	127-18-4
Tetrachloroethene	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	127-18-4
Tetrachloroethene	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	127-18-4
Tetrachloroethene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	127-18-4
Tetrachloroethene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	127-18-4
Tetrachloroethene	3.1	MW-10-2			1/31/06	2/7/06	WCF13302VA	127-18-4
Tetrachloroethene	3.2	MW-10-2			1/31/06	2/7/06	WCF13301VA	127-18-4
Tetrachloroethene	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	127-18-4
Tetrachloroethene	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	127-18-4
Toluene	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	108-88-3
Toluene	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	108-88-3
Toluene	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	108-88-3
Toluene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	108-88-3
Toluene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	108-88-3
Toluene	95	MW-10-2	D		1/31/06	2/7/06	WCF13302VA	108-88-3
Toluene	92	MW-10-2	D		1/31/06	2/7/06	WCF13301VA	108-88-3
Toluene	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	108-88-3
Toluene	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	108-88-3
1,1,1-Trichloroethane	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	71-55-6

Table B-2. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
1,1,1-Trichloroethane	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	71-55-6
1,1,1-Trichloroethane	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	71-55-6
1,1,1-Trichloroethane	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	71-55-6
1,1,1-Trichloroethane	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	71-55-6
1,1,1-Trichloroethane	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	71-55-6
1,1,1-Trichloroethane	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	71-55-6
1,1,1-Trichloroethane	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	71-55-6
1,1,1-Trichloroethane	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	71-55-6
1,1,2-Trichloroethane	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	79-00-5
1,1,2-Trichloroethane	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	79-00-5
1,1,2-Trichloroethane	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	79-00-5
1,1,2-Trichloroethane	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	79-00-5
1,1,2-Trichloroethane	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	79-00-5
1,1,2-Trichloroethane	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	79-00-5
1,1,2-Trichloroethane	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	79-00-5
1,1,2-Trichloroethane	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	79-00-5
1,1,2-Trichloroethane	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	79-00-5
Trichloroethene	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	79-01-6
Trichloroethene	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	79-01-6
Trichloroethene	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	79-01-6
Trichloroethene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	79-01-6
Trichloroethene	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	79-01-6
Trichloroethene	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	79-01-6
Trichloroethene	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	79-01-6
Trichloroethene	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	79-01-6
Trichloroethene	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	79-01-6
Vanadium	2.5	CPP-33-1	U		1/30/06	2/8/06	WCF128012X	7440-62-2
Vanadium	2.5	CPP-55-06	U		1/31/06	2/8/06	WCF132012X	7440-62-2
Vanadium	2.5	ICPP-2018	U		2/1/06	2/8/06	WCF130012X	7440-62-2
Vanadium	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131012X	7440-62-2
Vanadium	2.5	ICPP-2019	U		2/1/06	2/8/06	WCF131022X	7440-62-2
Vanadium	2.5	MW-2	U		1/31/06	2/8/06	WCF129012X	7440-62-2

Table B-2. (continued).

Constituent	Conc. (µg/L)	Location	Lab Qualifier	Validation Qualifier	Date Collected	Date Analyzed	Sample Number	CAS Number
Vanadium	2.5	MW-5-2	U		1/30/06	2/8/06	WCF125012X	7440-62-2
Vinyl chloride	1	CPP-33-1	U		1/30/06	2/7/06	WCF12801VA	75-01-4
Vinyl chloride	1	CPP-55-06	U		1/31/06	2/7/06	WCF13201VA	75-01-4
Vinyl chloride	1	ICPP-2018	U		2/1/06	2/7/06	WCF13001VA	75-01-4
Vinyl chloride	1	ICPP-2019	U		2/1/06	2/7/06	WCF13102VA	75-01-4
Vinyl chloride	1	ICPP-2019	U		2/1/06	2/7/06	WCF13101VA	75-01-4
Vinyl chloride	1	MW-10-2	U		1/31/06	2/7/06	WCF13302VA	75-01-4
Vinyl chloride	1	MW-10-2	U		1/31/06	2/7/06	WCF13301VA	75-01-4
Vinyl chloride	1	MW-2	U		1/31/06	2/7/06	WCF12901VA	75-01-4
Vinyl chloride	1	MW-5-2	U		1/30/06	2/7/06	WCF12501VA	75-01-4

Table B-3. Result qualifier and validation flag definitions.

Compound	Flag	Definition
		Result Qualifier (lab-assigned flags)
Metals	U	Analyte was analyzed for but not detected. Analyte was below the contract required detection limits.
	N	The associated matrix spike sample and/or the matrix spike duplicate sample had a reported recovery outside of control limits (80-120%).
	W	The associated analytical spike sample (the post-digestion spike sample) had a reported recovery outside of control limits (80-120%).
	B	Value less than contract required detection limit, but greater than or equal to the Instrument Detection Limit.
VOCs	U	Analyte was analyzed for but not detected. Analyte result was below the contract required detection limit.
	J	Estimated value, greater than method detection limit but less than EQL.
SVOCs	U	Analyte was analyzed for but not detected. Analyte was below the contract required detection limit.
Other	D	Results indicate the value is from a diluted analysis.
	J	Estimated value, greater than method detection limit but less than EQL.
	P	Results indicate that the percent difference between the reporting column and the confirmation column exceeds quality control limits.
	U	Analyte was analyzed for but not detected. Analyte result was below the contract required detection limit.
		Validation (validator-assigned) flags
Metals	R	The accuracy of the data is so questionable that it is recommended the data not be used.
	U	The constituent was analyzed for and was detected at or above the applicable detection limit. However, the associated value was less than 5 times the highest positive amount in any laboratory blank.
	J	The constituent was analyzed for and was detected at or above the applicable detection limit. The associated value is an estimate and may be inaccurate or imprecise.
VOCs	R	The accuracy of the data is so questionable that it is recommended the data not be used.
	UJ	The constituent was analyzed for but was not detected. The sample quantitation limit is an estimated value.
SVOCs	UJ	The constituent was analyzed for but was not detected. The sample quantitation limit is an estimated value.
Other	U	Analyte was analyzed for and was detected at or above the applicable detection limit but was qualified as nondetected at the reporting limit because the value was less than the blank action level.
	J	The constituent was analyzed for and the result is an estimated value.